Monthly and Seasonal Mean Analyses

December, January, February
1988/89

METEOROLOGICAL OFFICE

ORGS UKMO M

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Monthly and Seasonal Mean Analyses

December, January, February 1988/89

Mean fields obtained from the archive of operational analyses

Met O 20 (Dynamical Climatology Branch)
Meteorological Office
London Road
Bracknell
Berkshire RG12 2SZ

March 1989

Note: Permission to quote from this document should be obtained from the Assistant Director of the above Meteorological Branch.

Monthly and Seasonal Mean Analyses

Introduction

The archive of operational analyses contains a continuous record of global analyses every 12 hours (00 and 12 GMT) from May 1983 onwards. They are copies of the update analyses produced in the operational numerical weather prediction system using the 15-level model (Bell and Dickinson 1987). In this booklet there are presented monthly and seasonal mean fields computed from the archived analyses for a single season. Since a season spans three calendar months, there are four sections. Sections 1, 2 and 3 contain charts of the monthly mean fields for each month, and section 4 contains charts of the seasonal mean fields. The seasonal means are the means of the fields in the first three sections, weighted according to the number of days in each month.

Each section contains a set of charts for the northern and southern hemispheres and a set for the tropics. In each hemisphere, polar stereographic projects have been used to prepare a chart of pressure at mean sea level and composite charts showing both height (contours) and wind (vectors and isotachs) at 850, 500, 250 and 100 mb. In the tropics the charts are presented on a latitude–longitude projection encircling the globe in three sections covering the longitudes 0°–120°E, 120°E–120°W and 120°W–0°. This projection has been used to produce a series of charts of wind vectors and isotachs at 850 and 250 mb. On all charts, contours are depicted as solid lines, wind vectors as arrows and isotachs as dashed lines.

When archiving was first undertaken, for May 1983, global fields were stored according to their coefficients in a series of spherical harmonics up to a triangular truncation of T40 (Swinbank 1984). Since this is roughly equivalent to a latitude–longitude grid with a resolution of 4.5° by 4.5°, the conversion from the model's standard grid of 1.5° by 1.875° to the spectral representation results in some smoothing of the fields. Subsequently, a new method for storing the archived fields was developed as a result of discussions within the Working Group on the Development of the Operational Suite (WGDOS). This method uses a compressed digital coding of the original model field, on its standard latitude–longitude grid, but with fewer significant figures (Lowther 1986). It was implemented on 18 December 1985 in a limited version. After the inclusion of more fields, and following monitoring to ensure that the two representations (i.e. truncated spectral and compressed grid-point) of the archived analyses were consistent, the spectral archive was terminated on 31 October 1986.

The contents of the archives may be examined by consulting the computer data set 'M20.NARCHIND', where the tape number, file number and data set name for each archived day may be found. The fields in the spectral archive are stored in the format required by the post-processing (p-p) package. Details of the format and of the subroutines to be used for accessing the data are described in the manual for the p-p package. Some examples are shown in Swinbank (1984). The fields in the daily grid-point archive are stored as printfiles (Lowther 1986). A list of the fields in each of the two versions of the daily archive is given in the relevant documentation.

The monthly and seasonal mean fields have been computed from the spectral archive up to the end of October 1986. Thereafter, they have been computed from the grid-point archive. The mean fields are held as computer data sets in Met O 20, in spectral or grid-point format, as appropriate, and are available for general use. Means for each month and season over three years of the spectral archive are also available. The mean fields that are held are as follows:

Field		Pressure level (mb)
Westerly wind component	(m/s)	1000*, 850, 700, 500, 400, 300, 250, 200, 150, 100, 70, 50
Southerly wind component	(m/s)	
Height	(dam)	
Temperature	(K)	
Relative humidity	(%)	1000*, 850, 700, 500, 400, 300
Pressure at mean sea level	(mb)	

* Fields at 1000 mb are held in the spectral archive. In the grid-point archive this level has been omitted and fields at 950 mb are held instead.

References

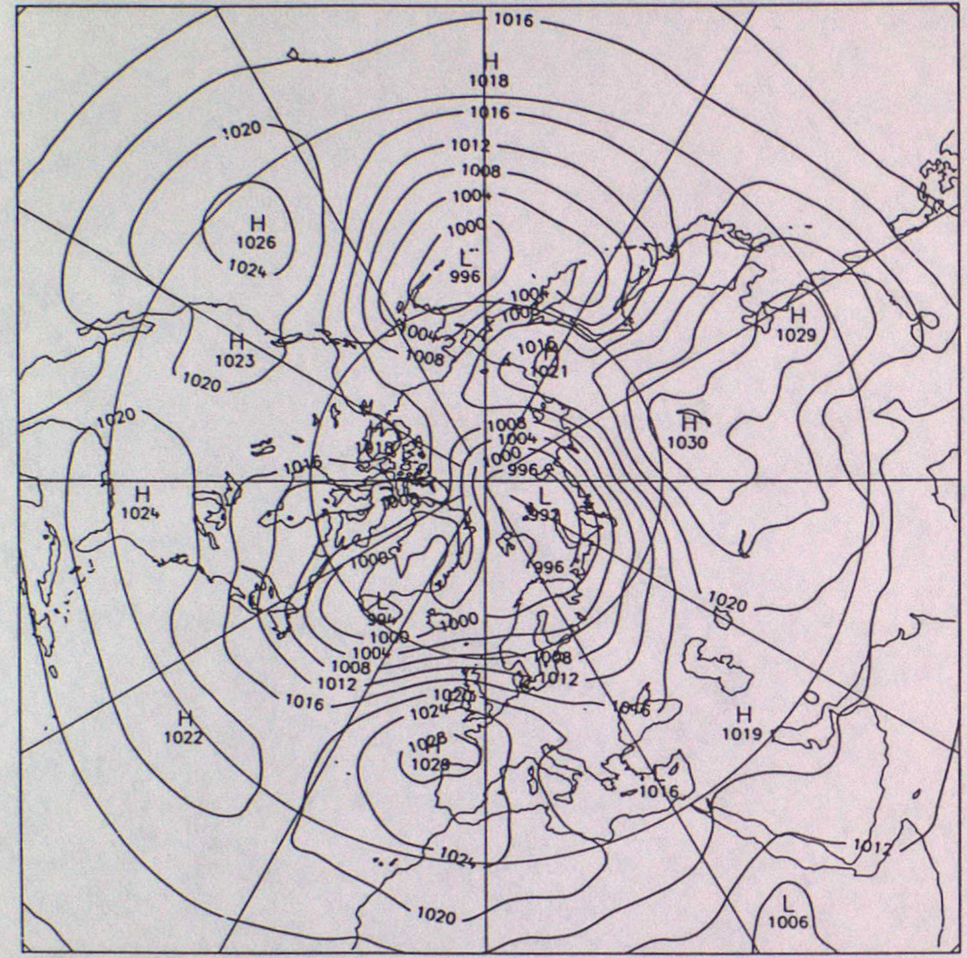
Bell, R.S. and Dickinson, A. 1987 The Meteorological Office operational numerical weather prediction system, Meteorological Office Scientific Paper No. 41, Met.O.979, HMSO.

Lowther, D. 1986 WGDOS Printfile Archive, Operational NWP Scheme, Documentation Paper No. 9.1, Met O 2b, Meteorological Office, Bracknell.

Swinbank, R. 1984 A system to archive operational analyses for research purposes. Met O 20 Technical Note No. II/218. Meteorological Office, Bracknell.

DECEMBER
1988

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
PMSL
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
SEA LEVEL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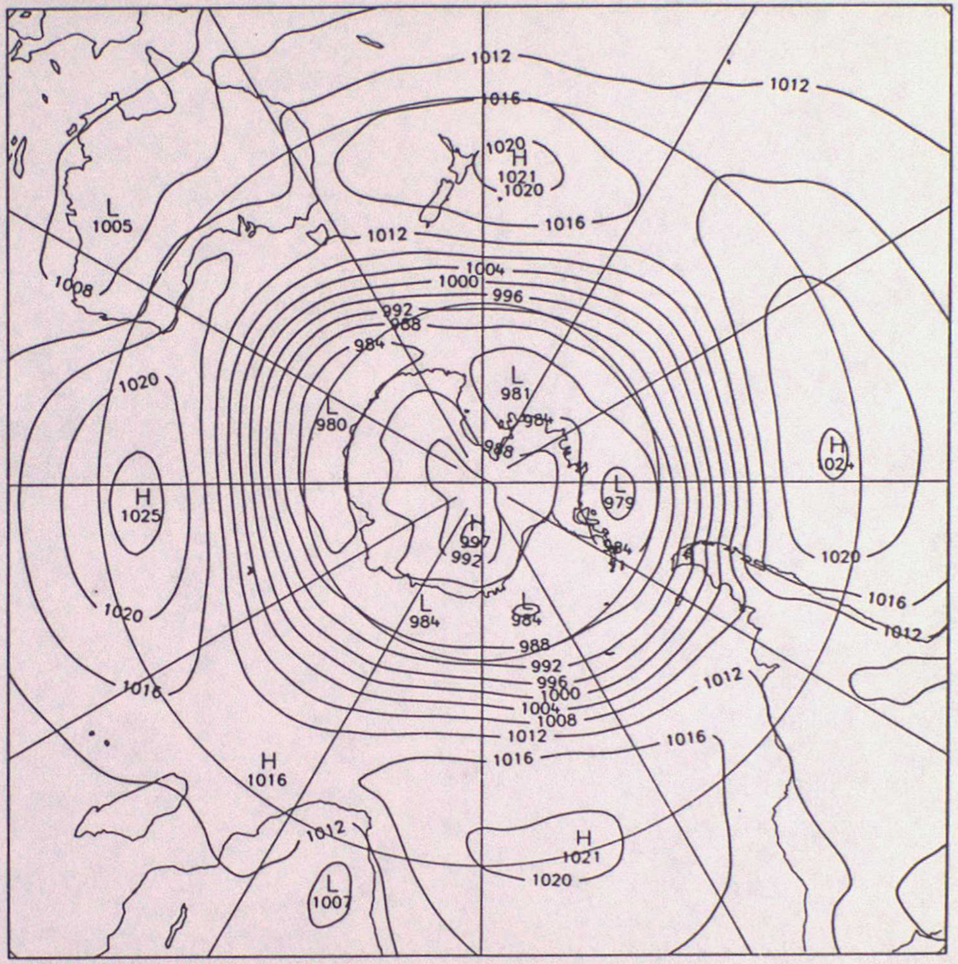
1016
1020
1024
1012
1008
1004
1000
996

CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
PMSL
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
SEA LEVEL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1012
1016
1020
1008
1004
1000
996
992
988
984

CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
HEIGHTS, WIND ARROWS AND ISOTACHS.
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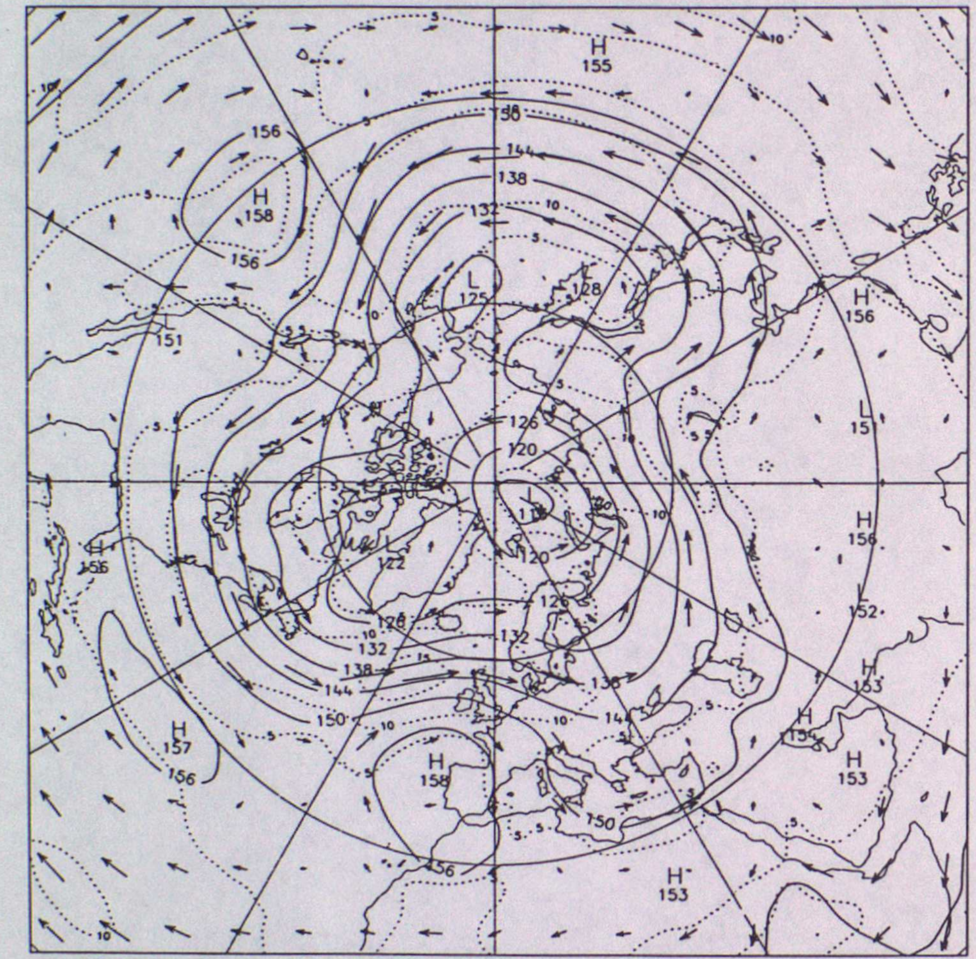

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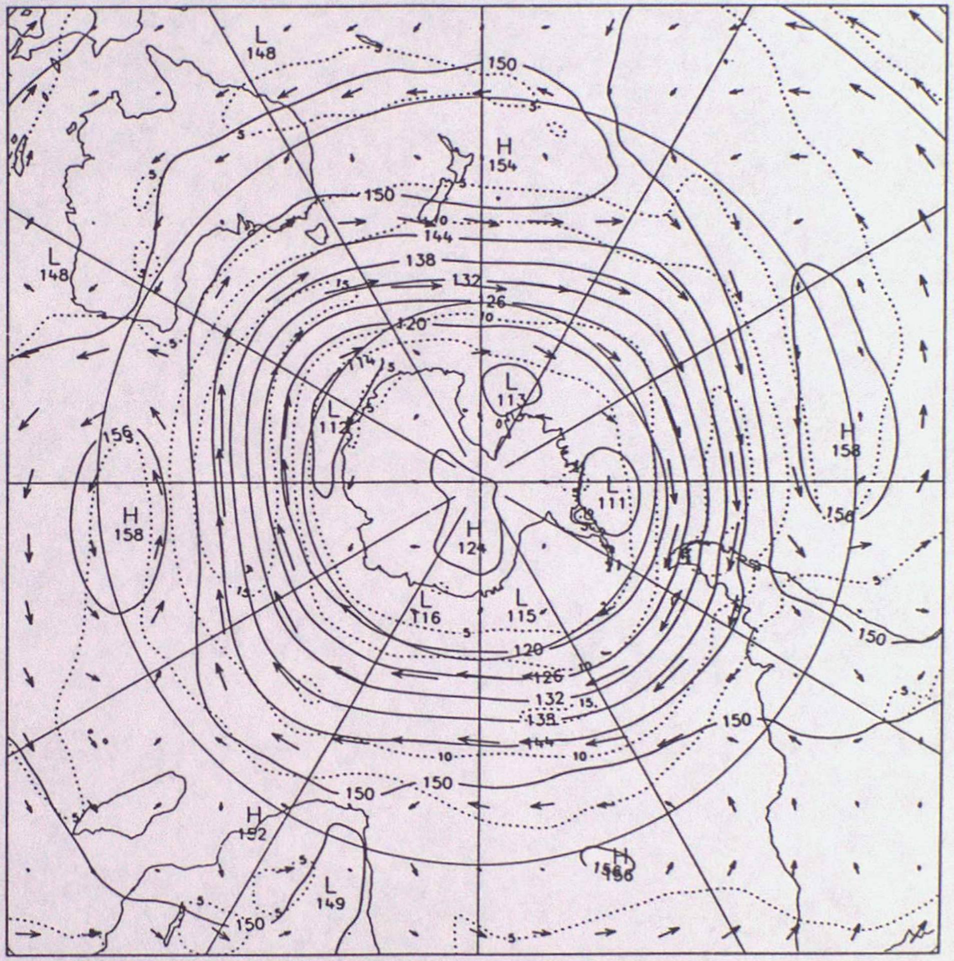
132
138
144
150
132
138
144
150
H 157
156
H 158
H 153
H 154
H 153
156
H 153
10
5

→ REPRESENTS 10 M/S CONTOUR INTERVAL: 60 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
LEVEL: 850 MB



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150
H 152
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150
H 156
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15
5

→ REPRESENTS 10 M/S CONTOUR INTERVAL: 60 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
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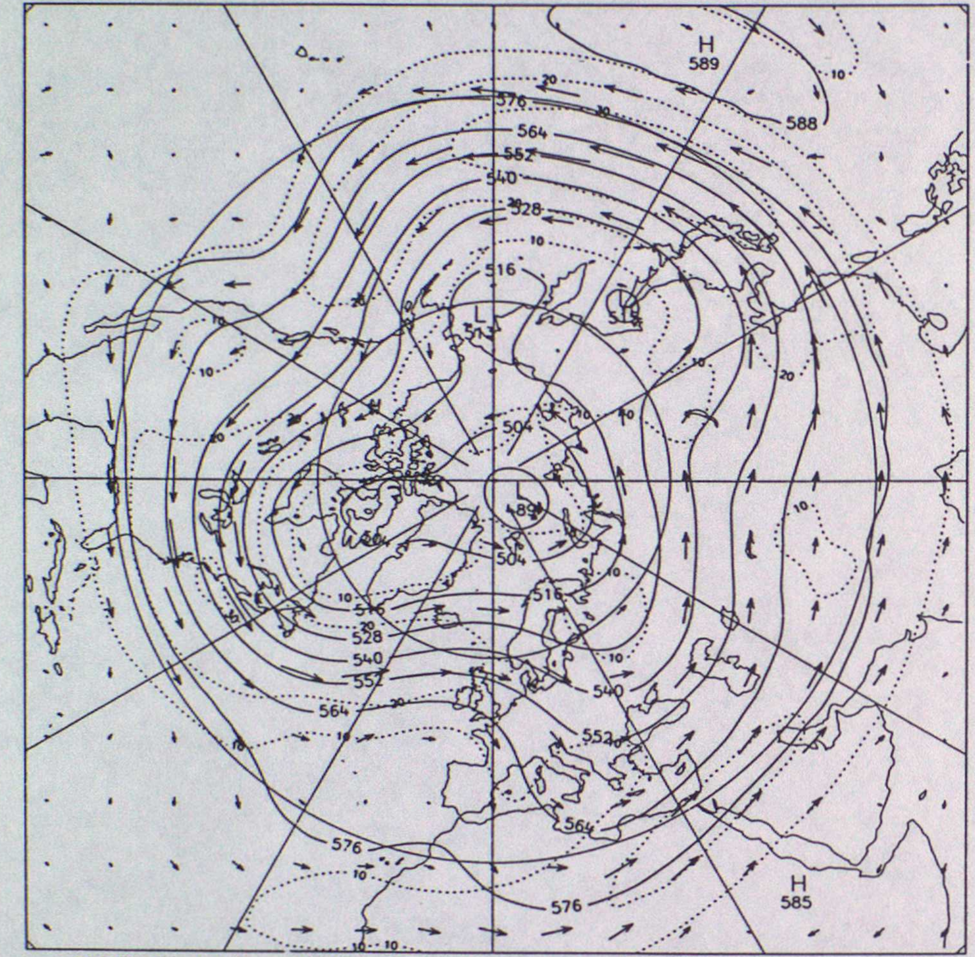
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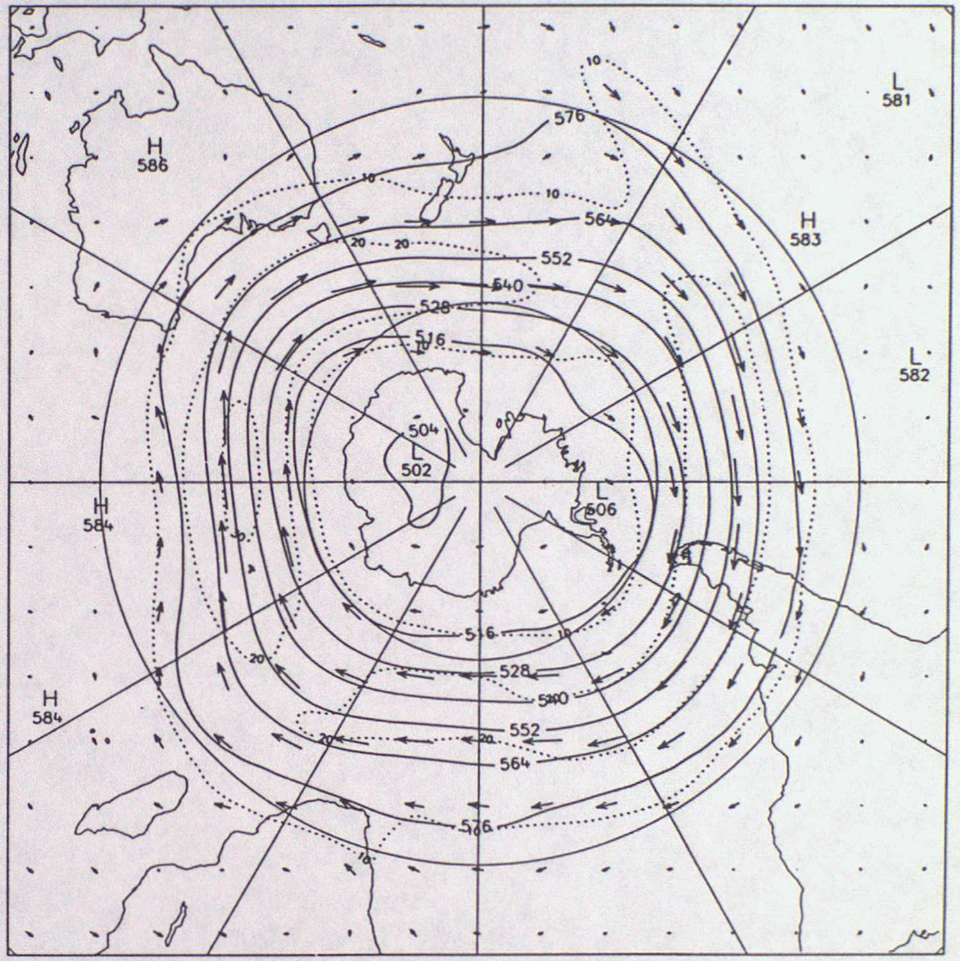
OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
LEVEL: 500 MB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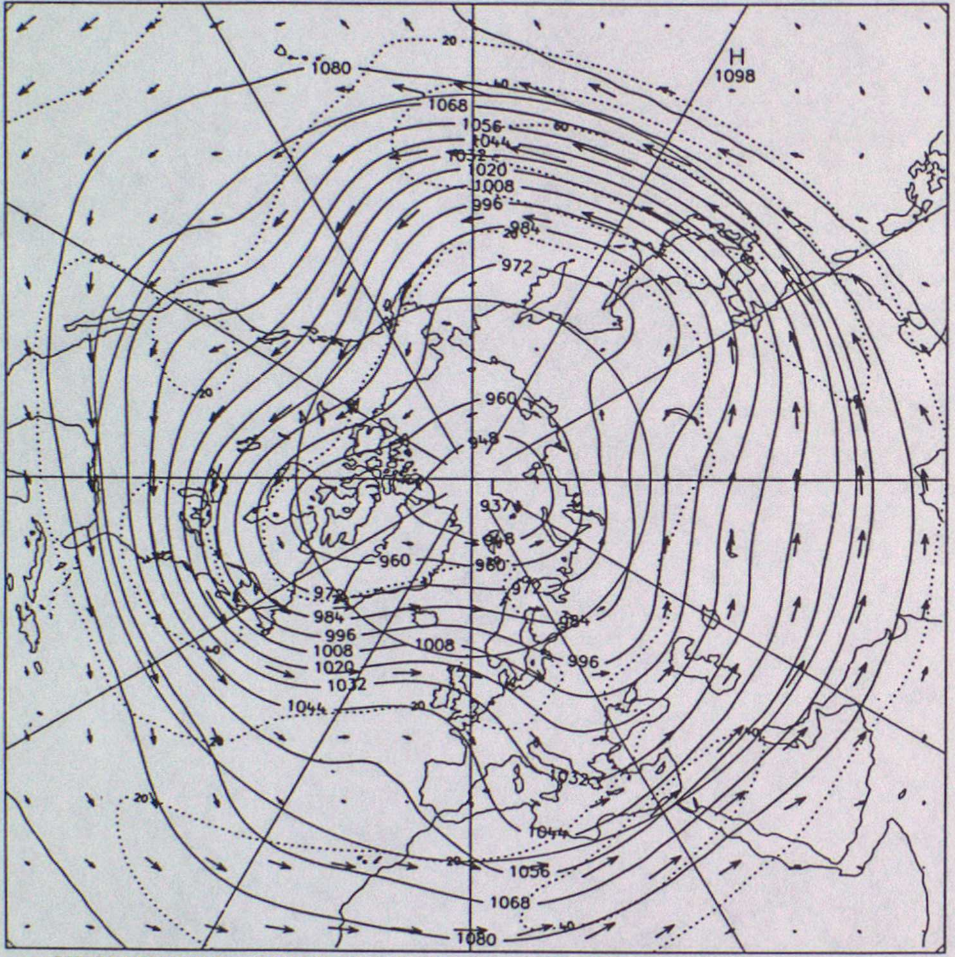
584
H
584
10
20

→ REPRESENTS 20 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
LEVEL: 250 MB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972
984
996
1008
1020
1032
1044
1056
1068
1080
20
40

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
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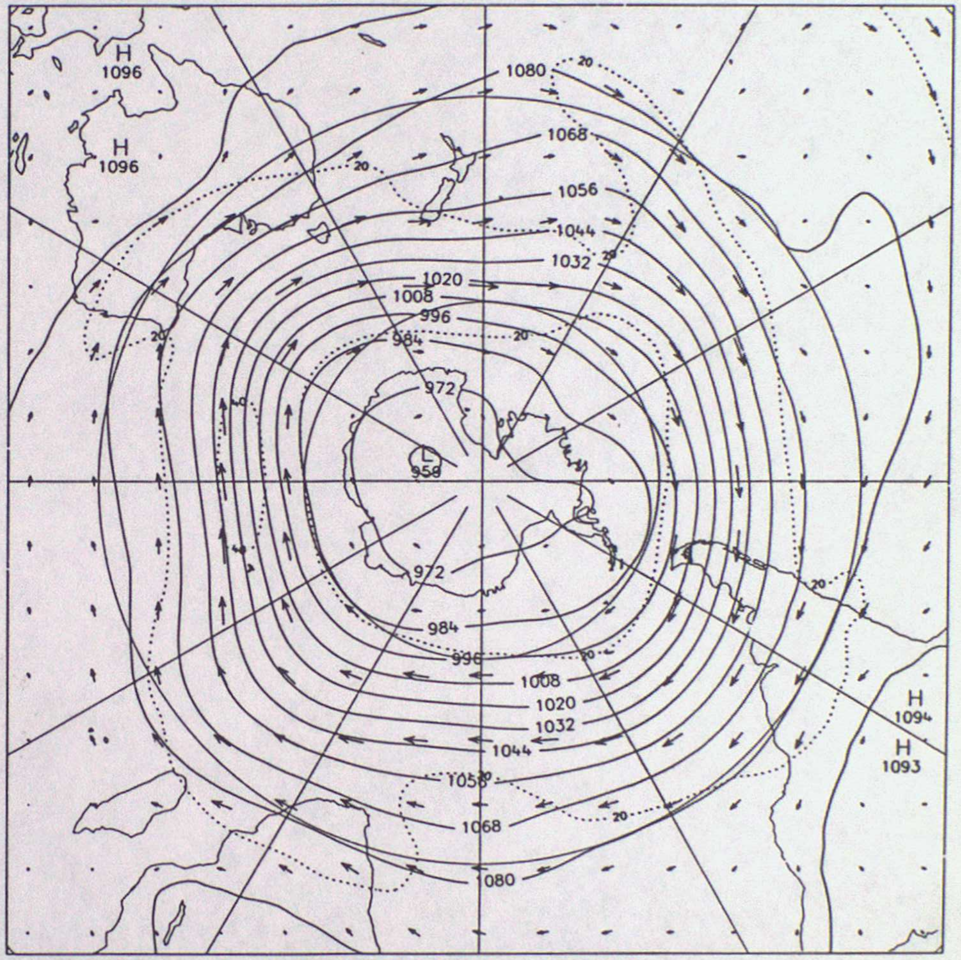
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996
1008
1020
1032
1044
1056
1068
1080
H
1094
H
1093
20
40

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
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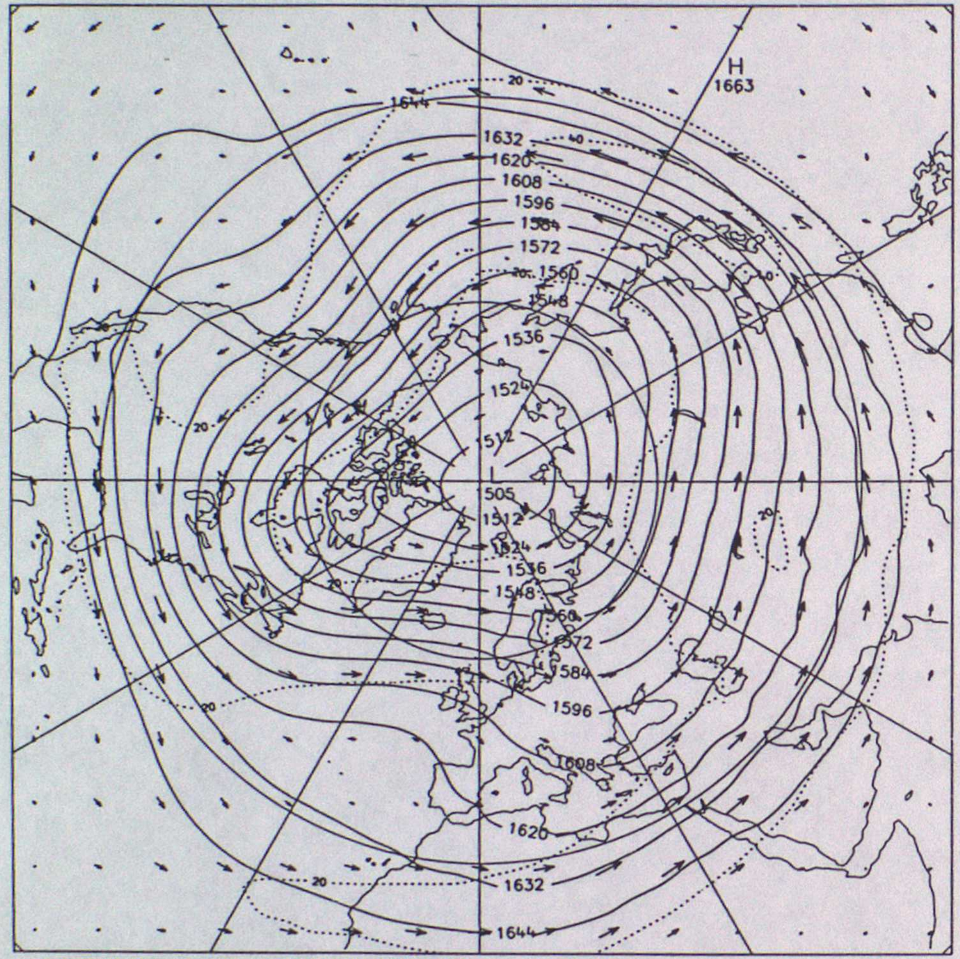
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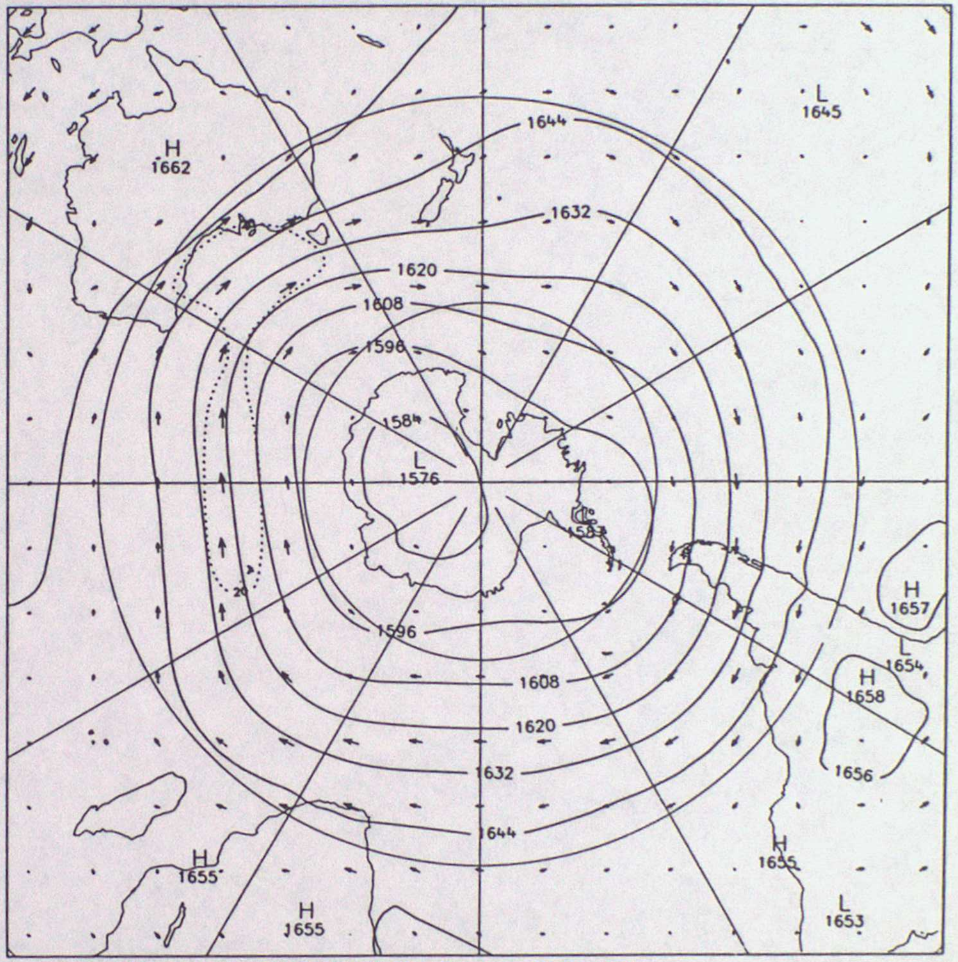
1505
20
40

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
LEVEL: 100 MB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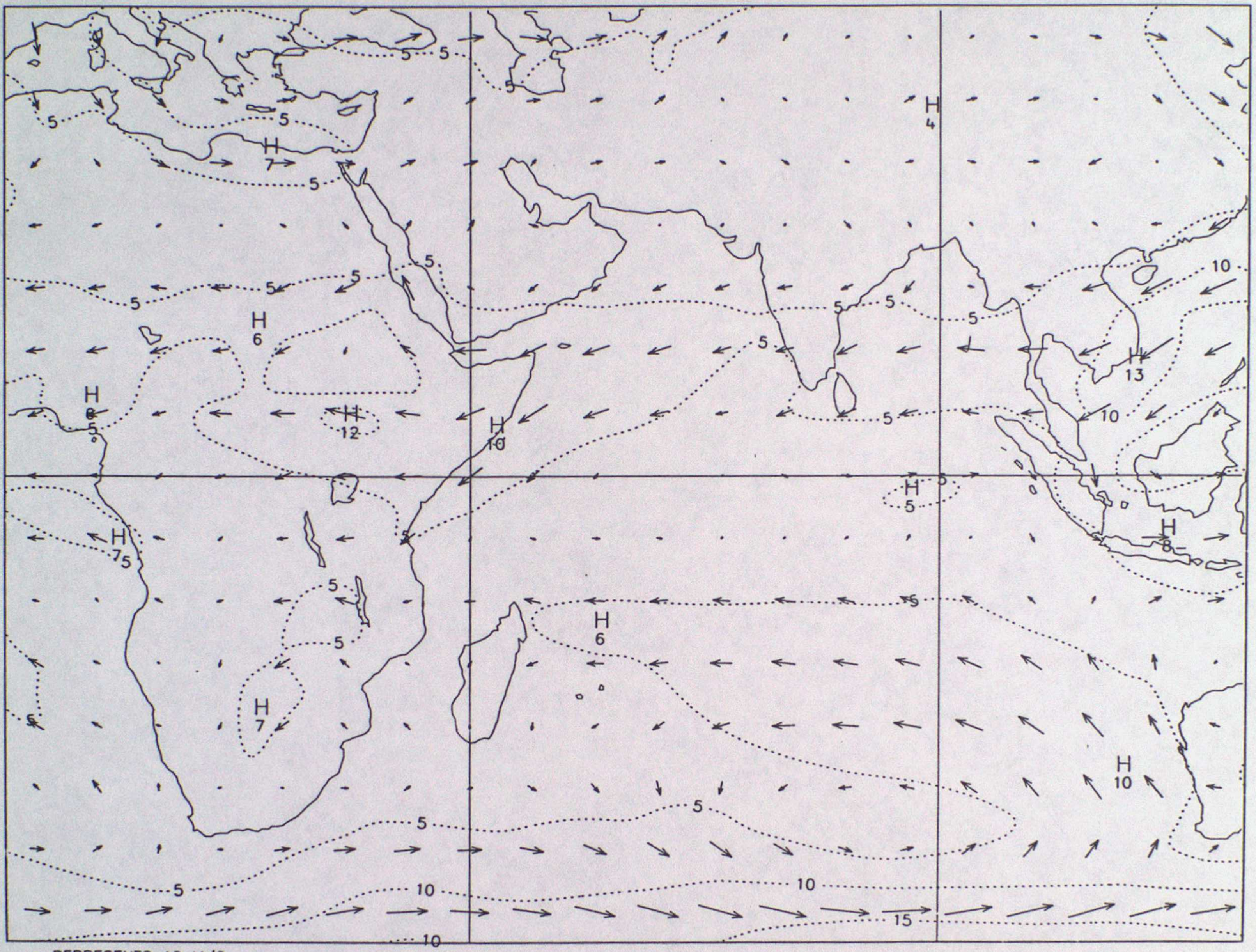
1655
L
1653
H
1655
H
1655

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   DECEMBER   1988
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
850 MBS.   BETWEEN LONGS. 0 E - 120 E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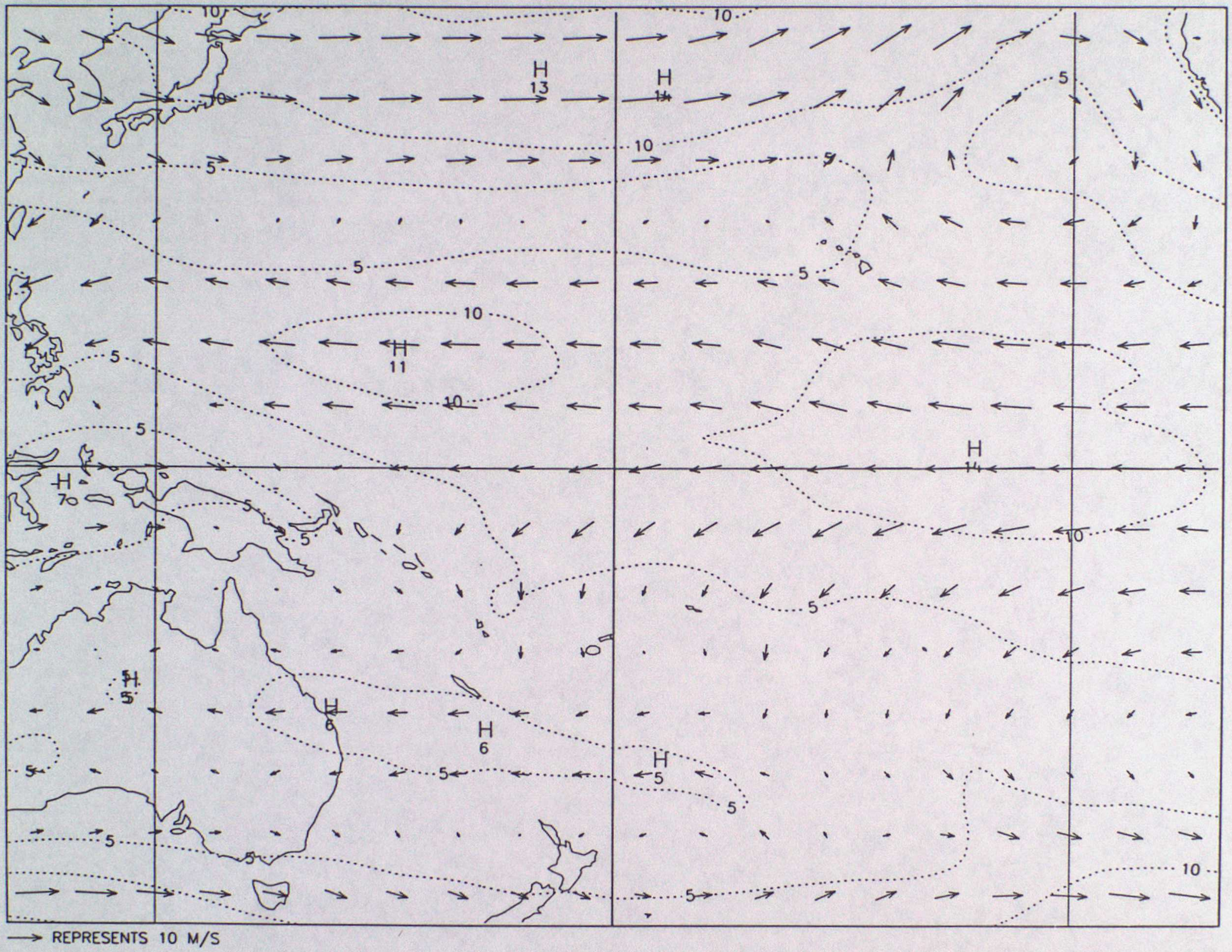
15

→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
850 MBS. BETWEEN LONGS. 120 E - 120 W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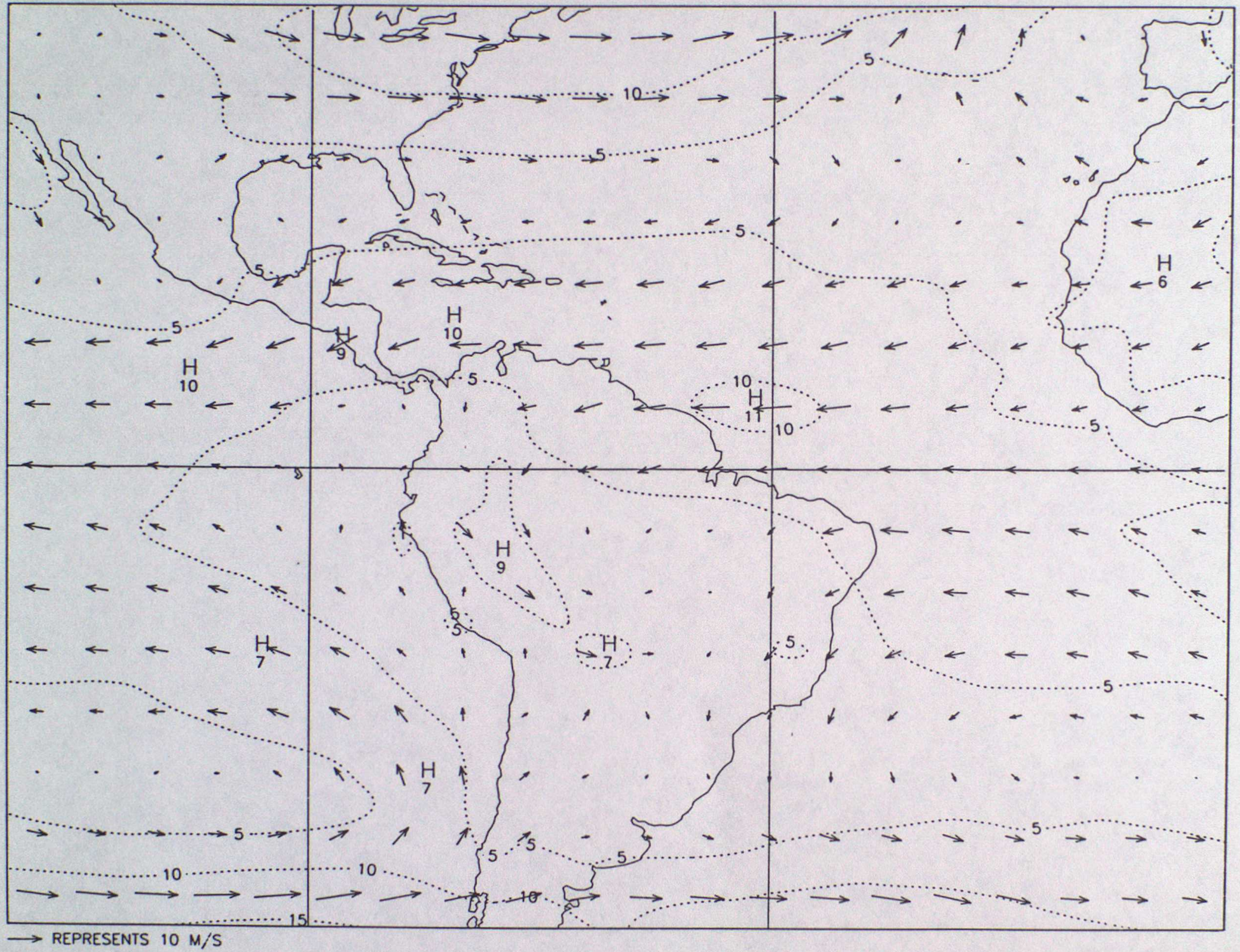
→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.　　DECEMBER　1988
WIND ARROWS AND ISOTACHS　BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM　0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
850 MBS.　　　　　　　BETWEEN LONGS. 120 W - 0 W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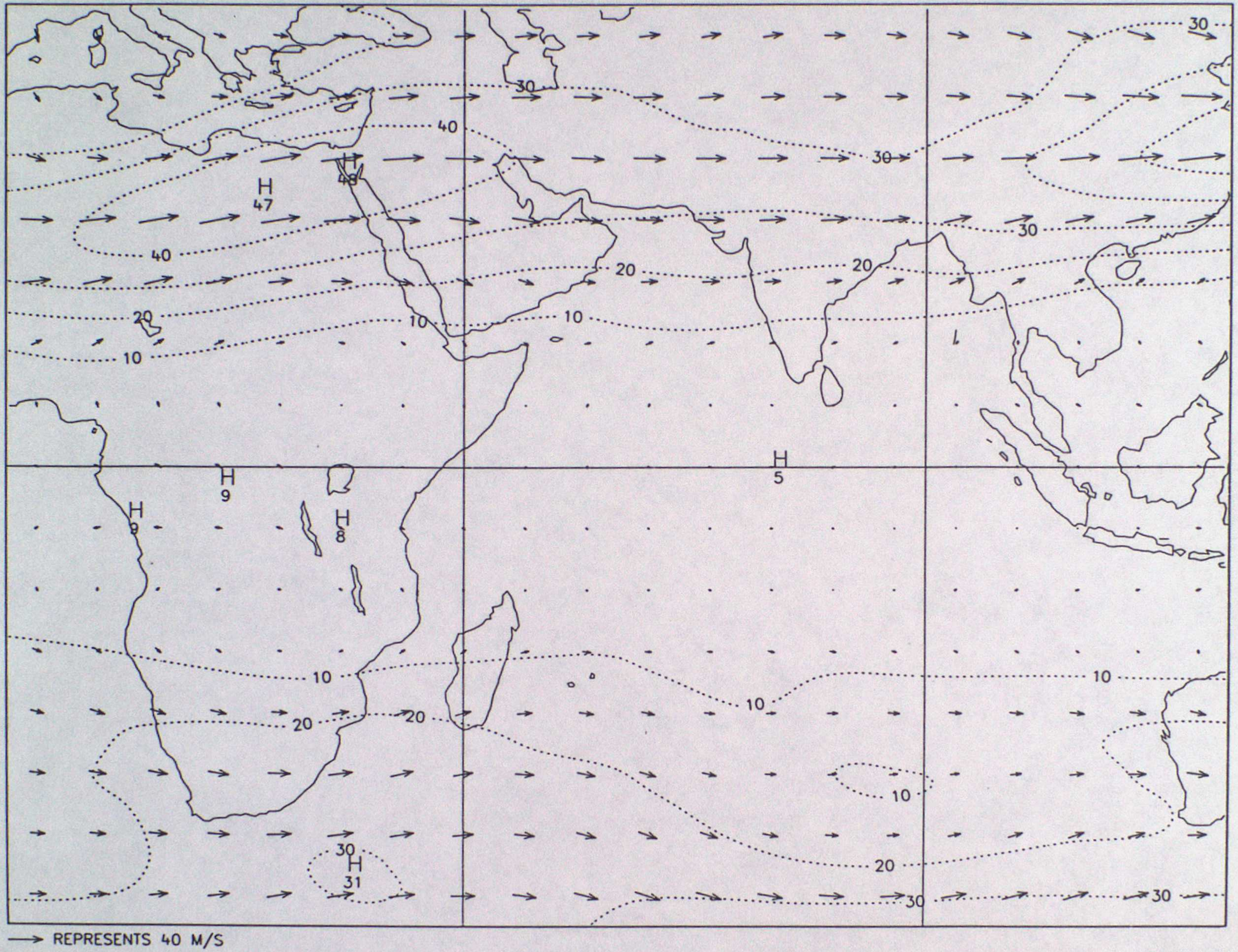
→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.   DECEMBER   1988
WIND ARROWS AND ISOTACHS   BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM   0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
250 MBS.   BETWEEN LONGS. 0 E - 120 E



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20
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10
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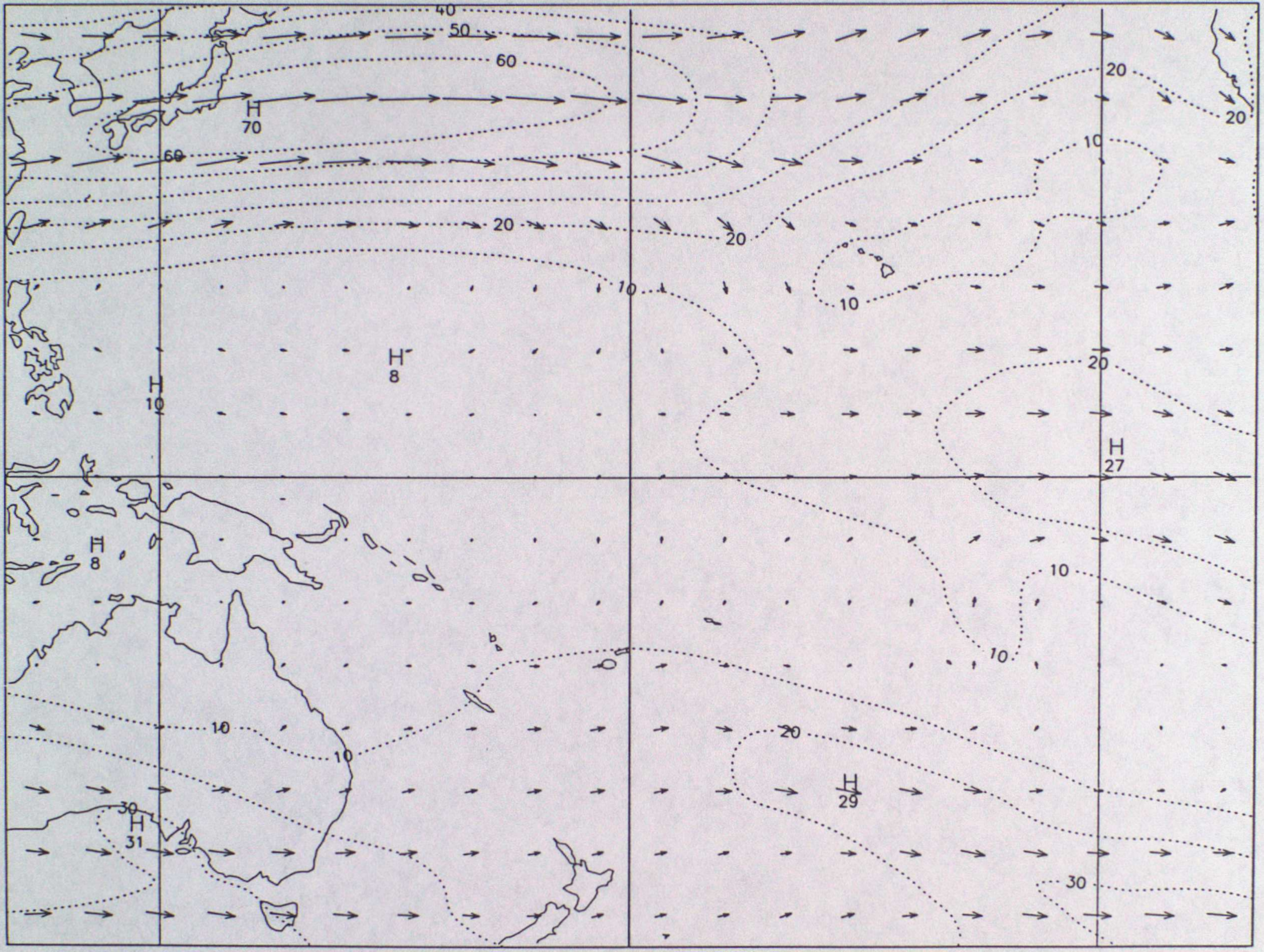
H
31
30
30
30
→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS.   DECEMBER   1988
WIND ARROWS AND ISOTACHS   BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM   0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
250 MBS.   BETWEEN LONGS. 120 E - 120 W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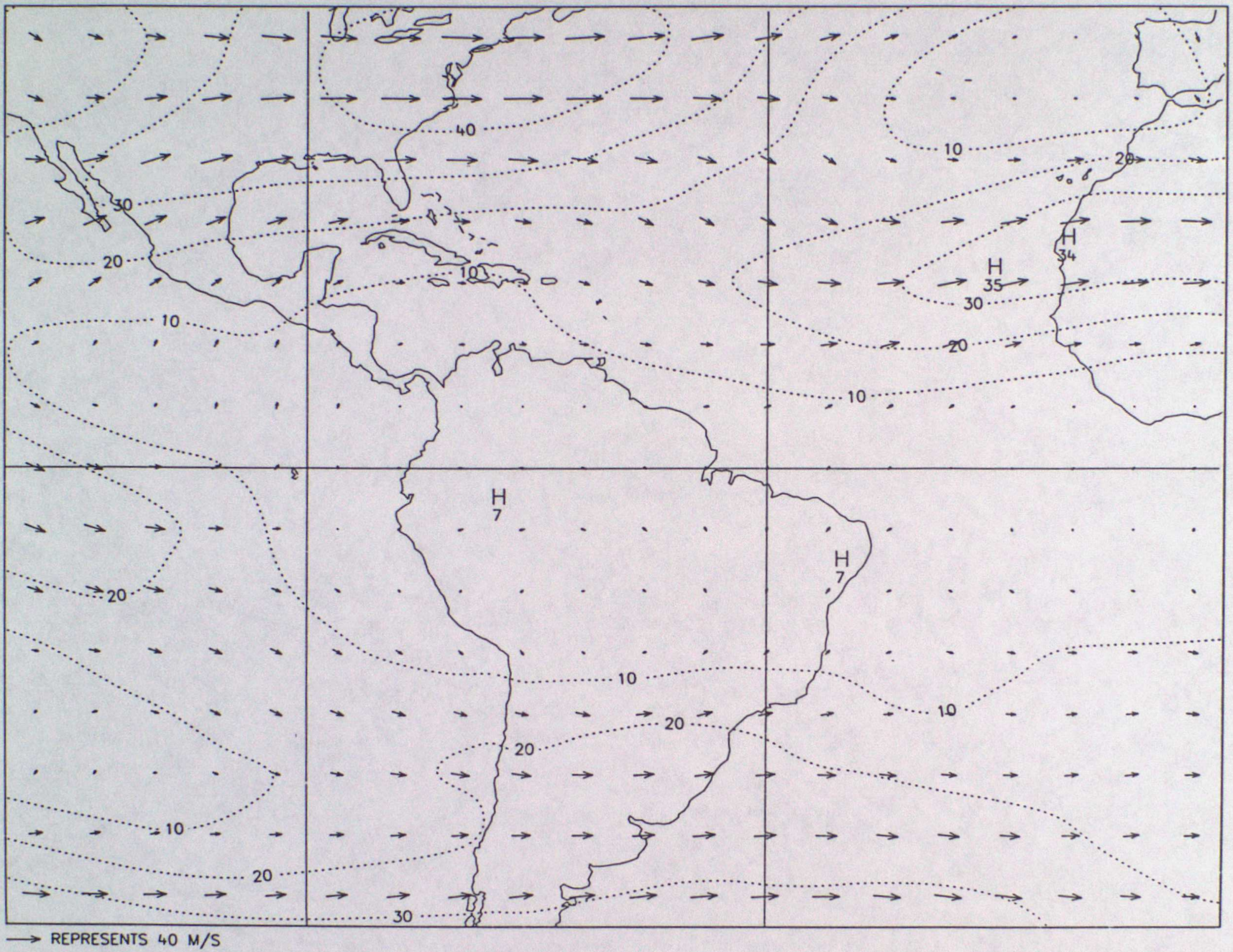
10
10
10
10
20
H
29
30
H
31
30

→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS. DECEMBER 1988
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 31/12/1988 DAY 366
250 MBS. BETWEEN LONGS. 120 W - 0 W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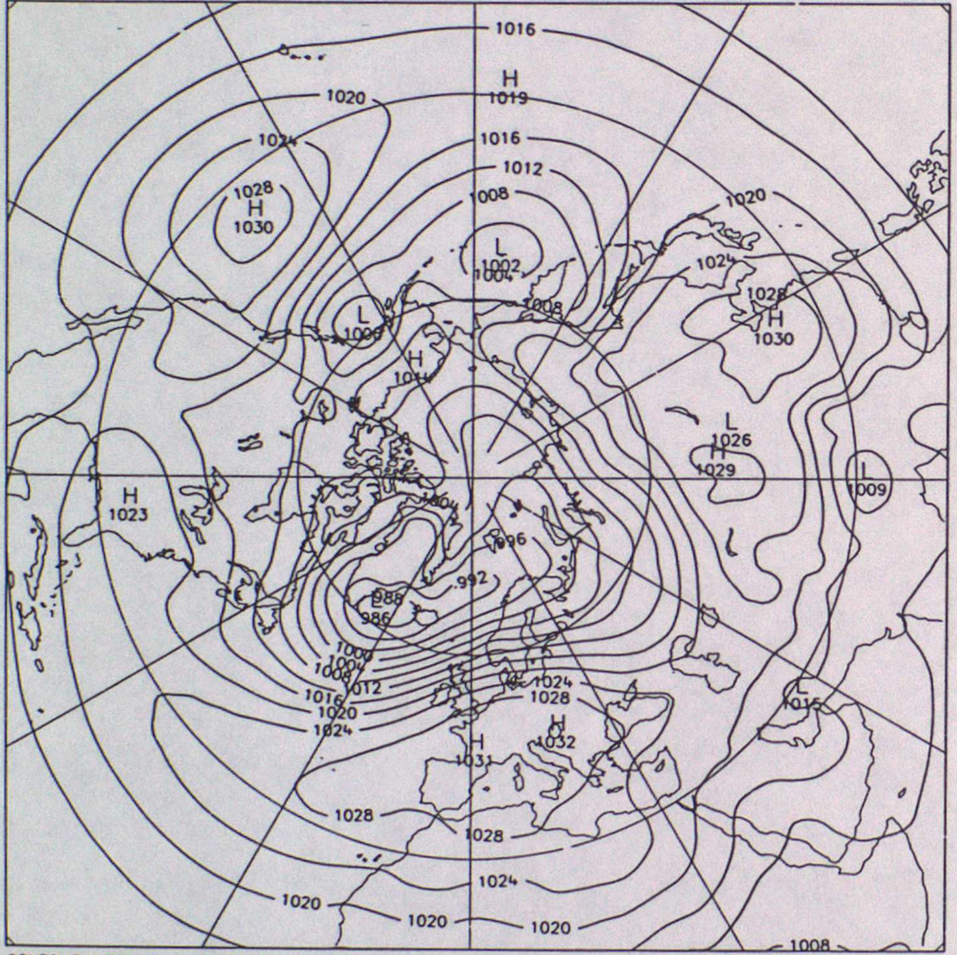
30
→ REPRESENTS 40 M/S

JANUARY
1989

OPERATIONAL ARCHIVE MEANS. JANUARY 1989
PMSL
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
SEA LEVEL



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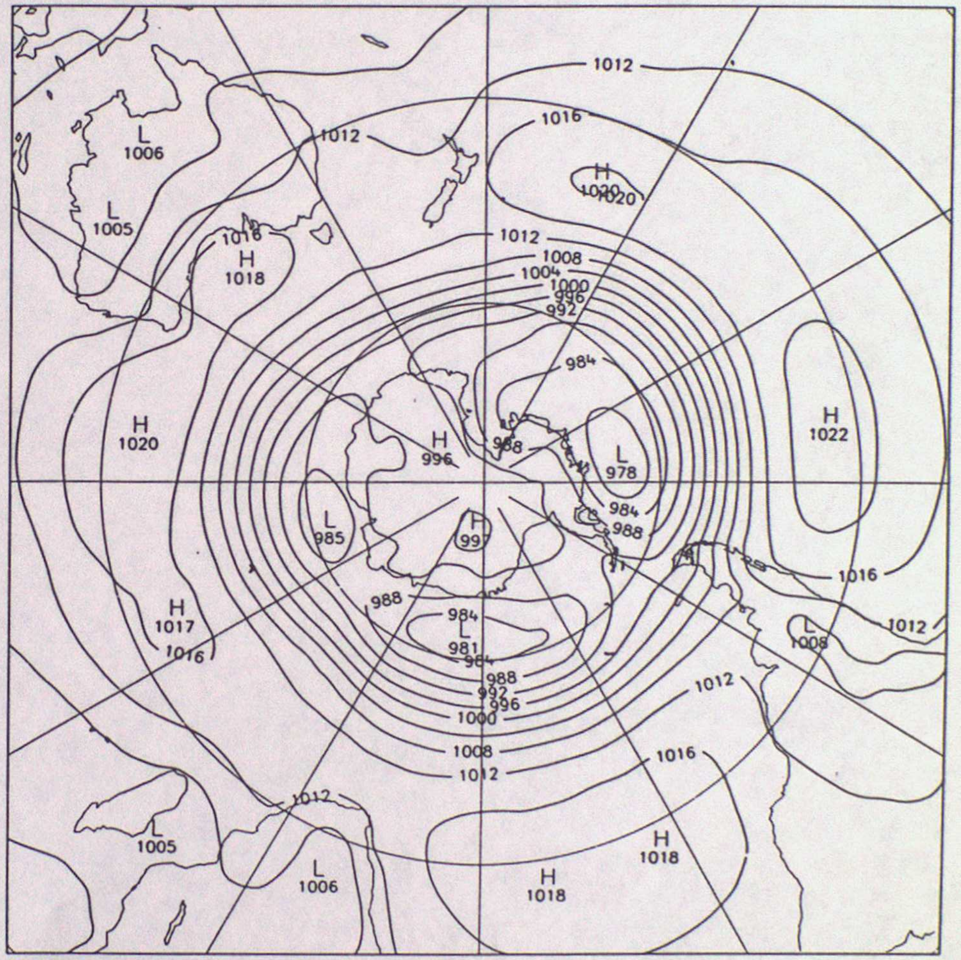
1020
1008

CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS. JANUARY 1989
PMSL
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
SEA LEVEL



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H 1022
L 985
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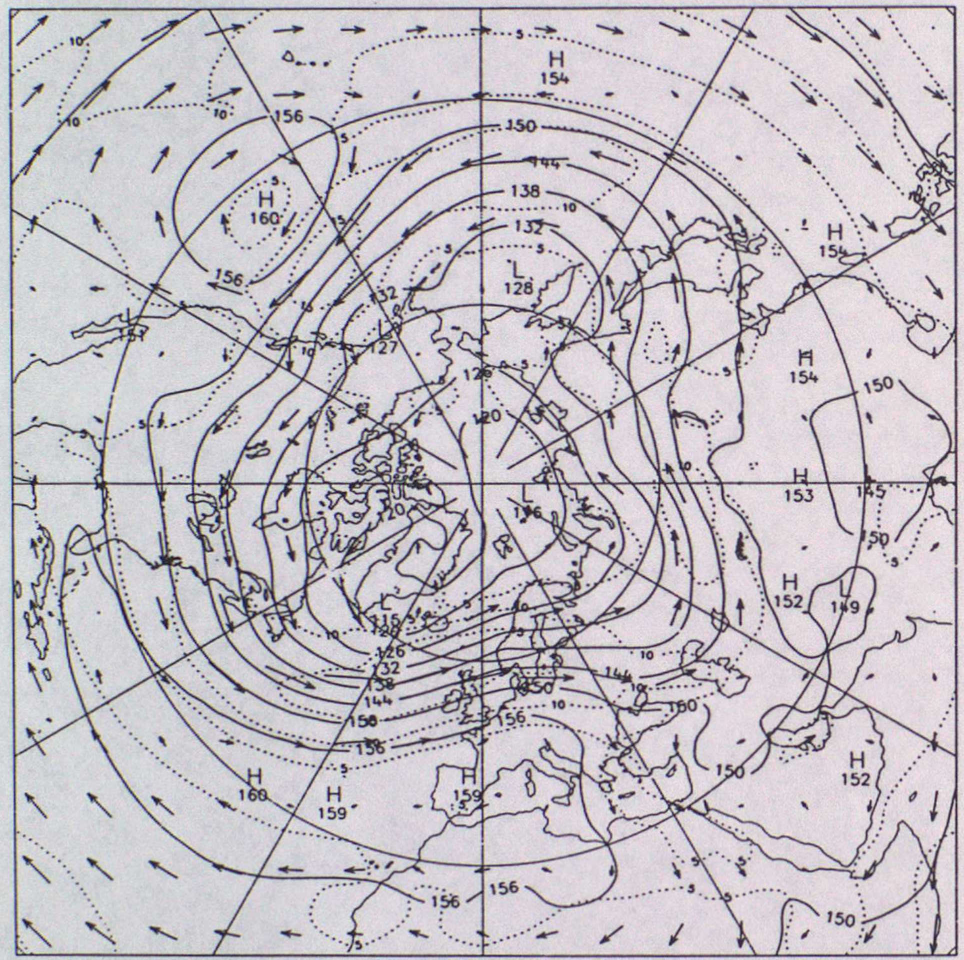
H 1018

CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS.   JANUARY   1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
LEVEL: 850 MB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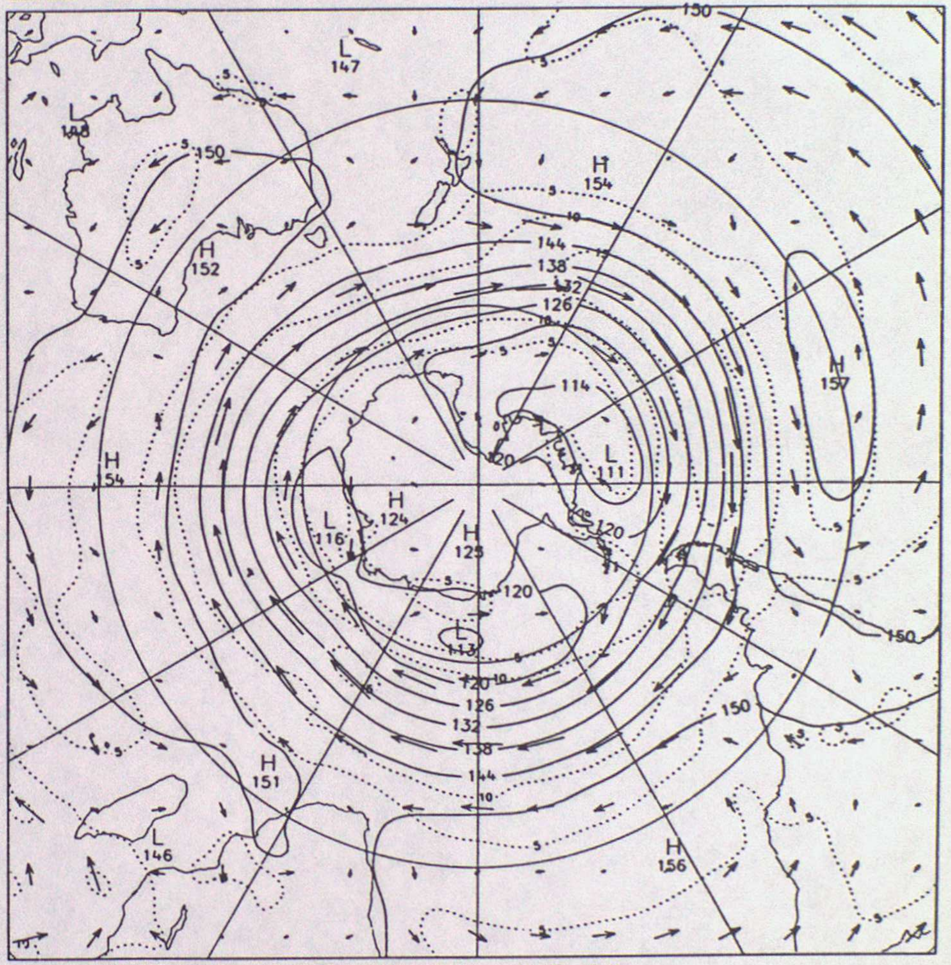
132
126
120
10
5

→ REPRESENTS 10 M/S   CONTOUR INTERVAL: 60 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   JANUARY   1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
LEVEL: 850 MB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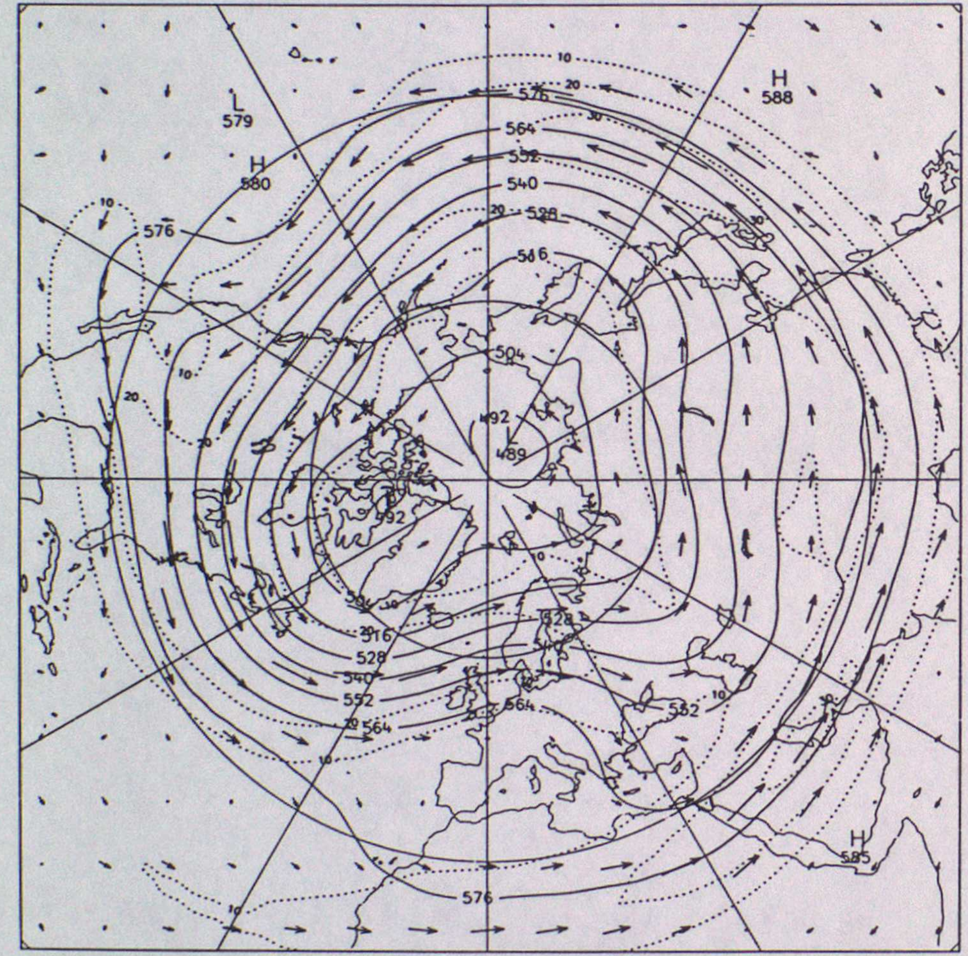
10
5

→ REPRESENTS 10 M/S   CONTOUR INTERVAL: 60 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JANUARY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
LEVEL: 500 MB



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30
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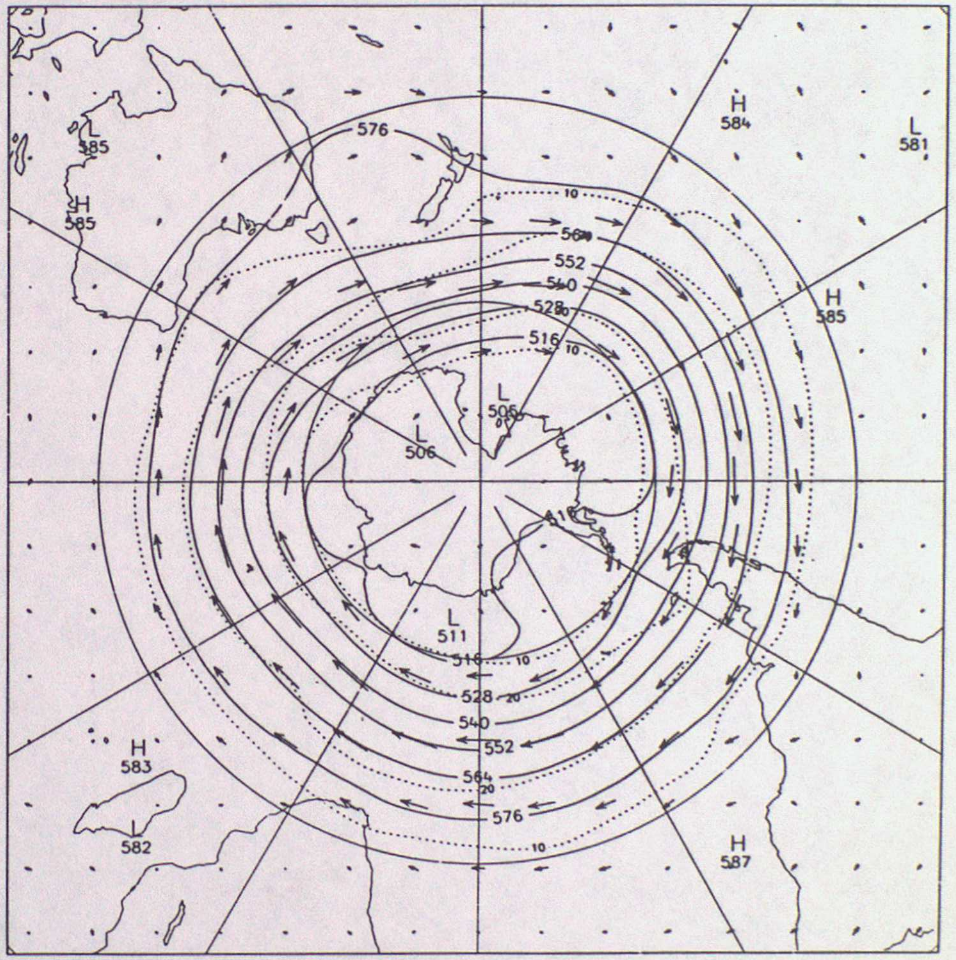
576

→ REPRESENTS 20 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JANUARY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
LEVEL: 500 MB



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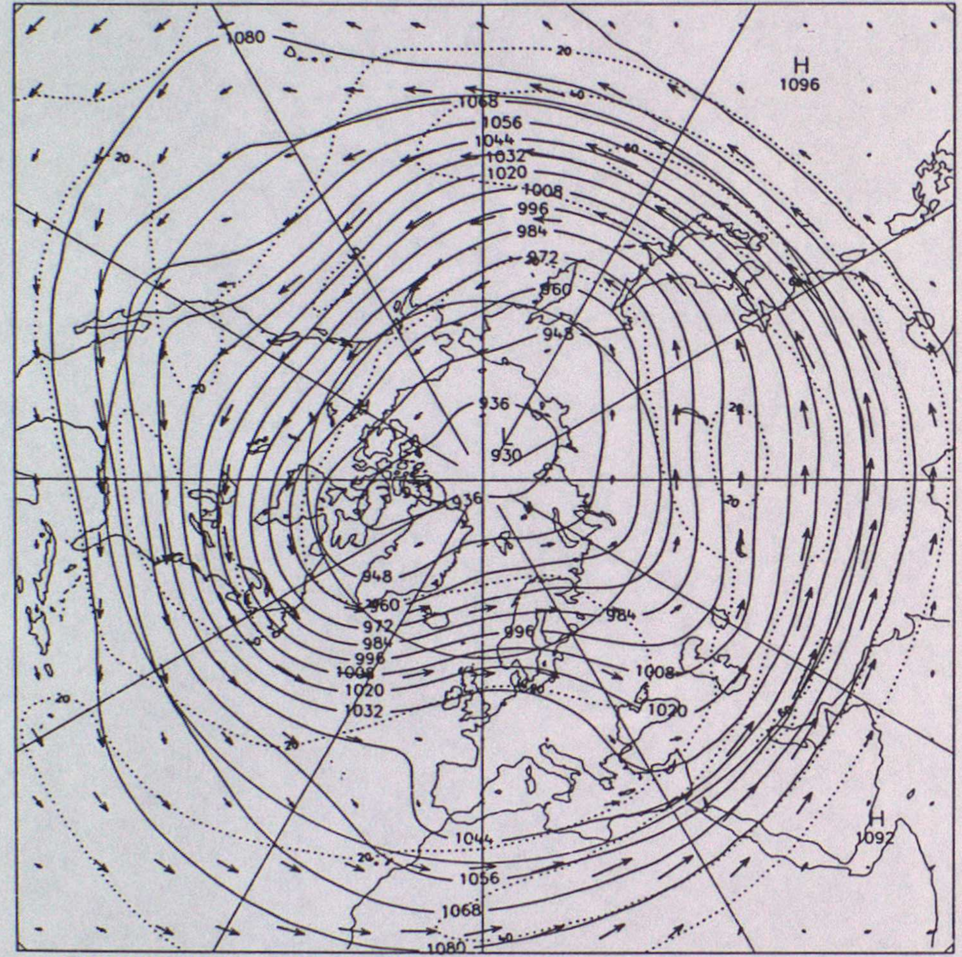
H 587

→ REPRESENTS 20 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JANUARY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
LEVEL: 250 MB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1008
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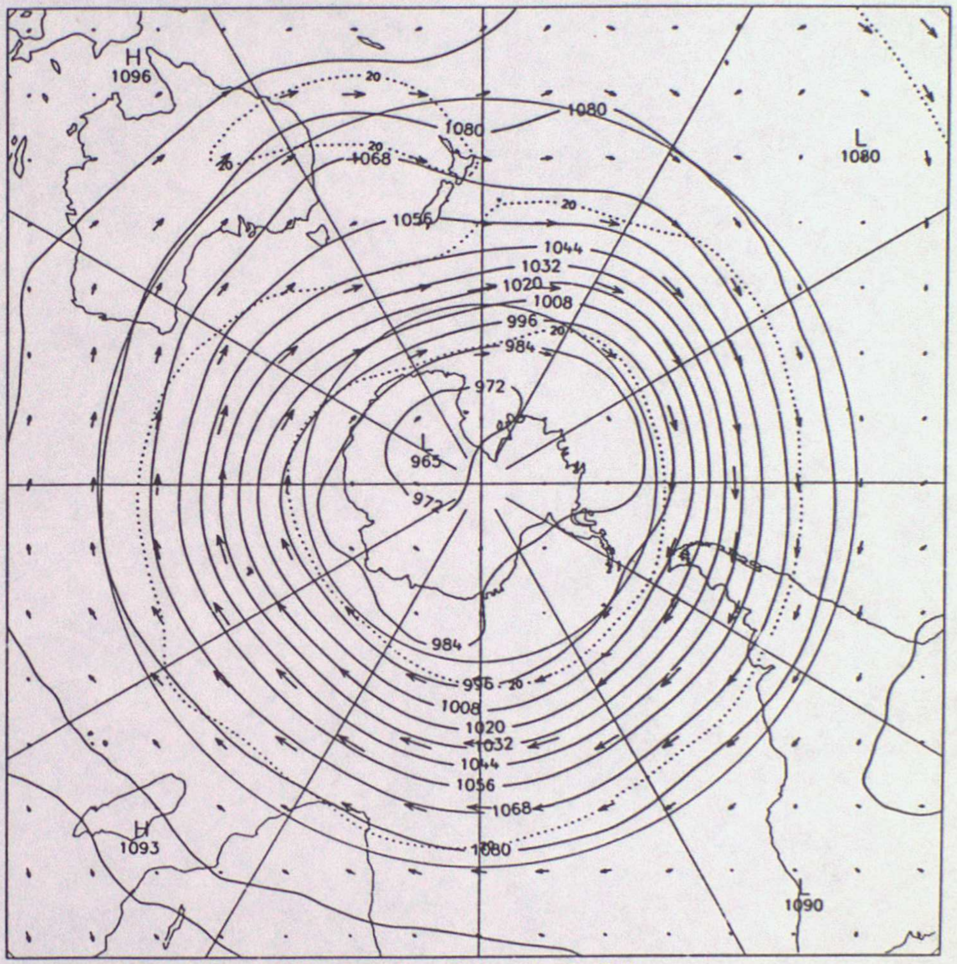
1008
1020
1044
1056
1068
1080
H
1092

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JANUARY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
LEVEL: 250 MB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996
1008
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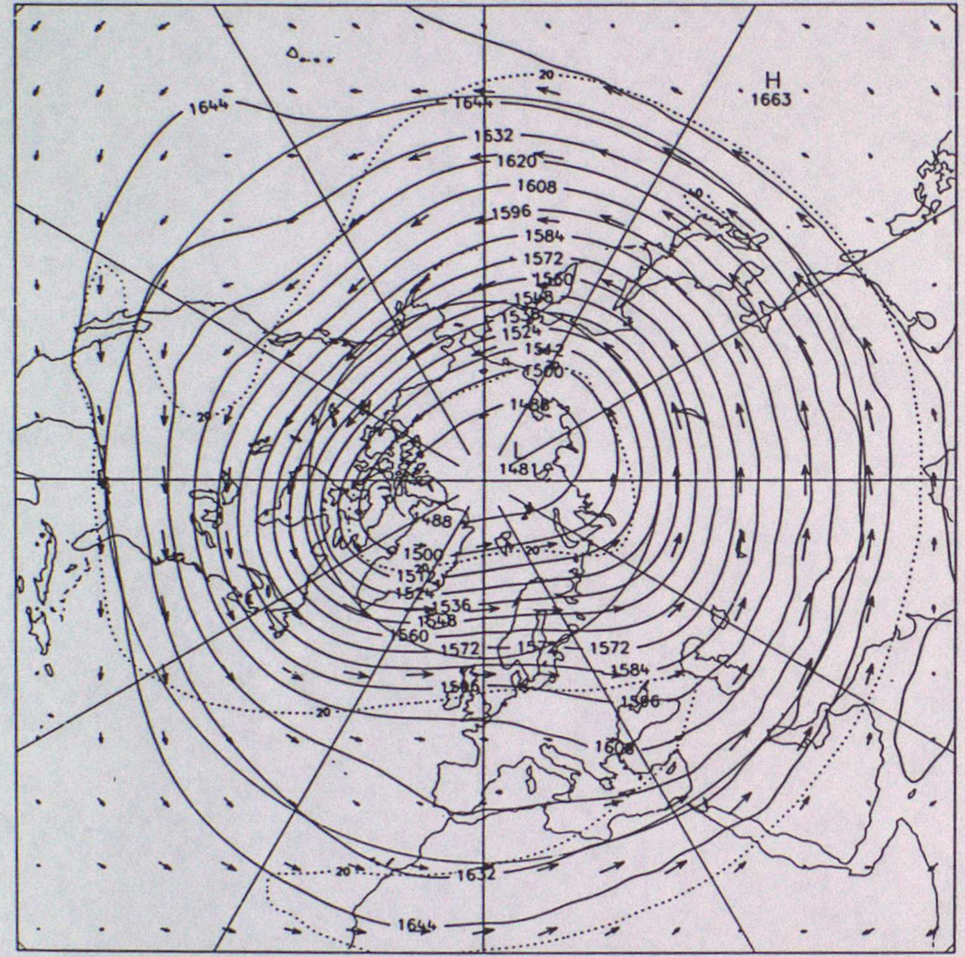
1068
1080
H
1093
L
1090

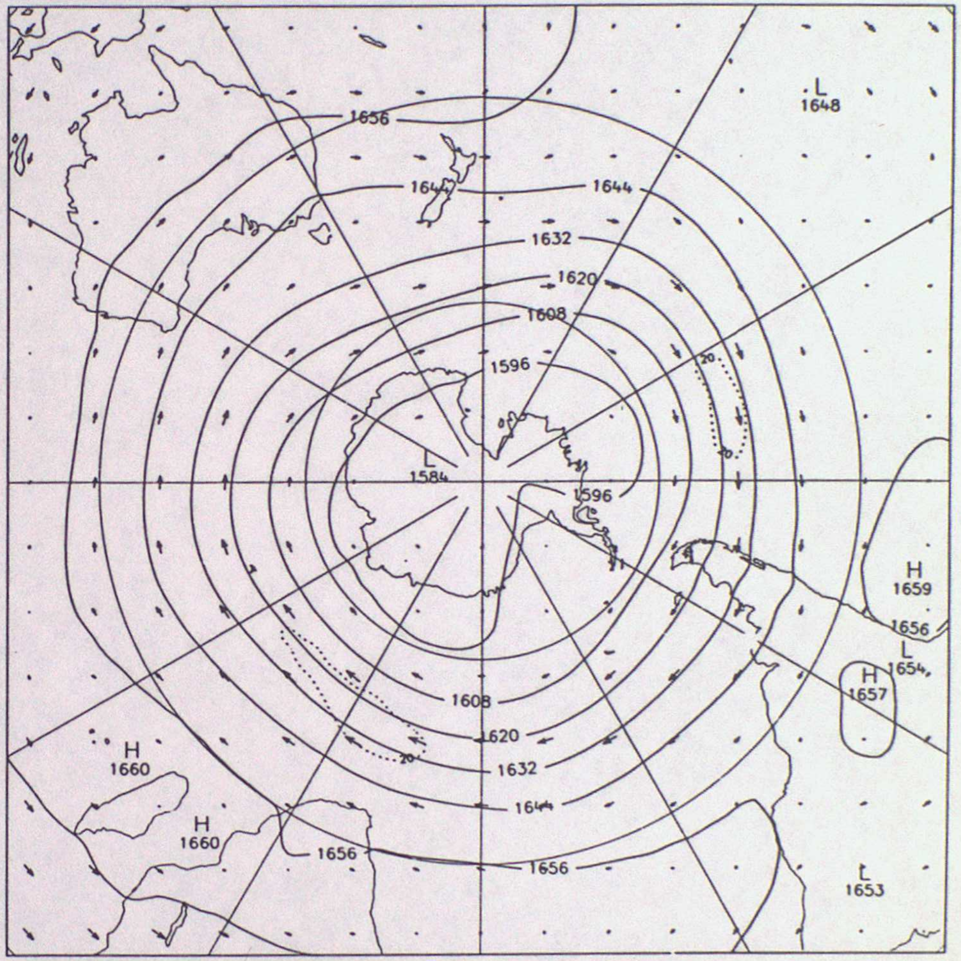
→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   JANUARY   1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
LEVEL: 100 MB


H
1663
1644
1632
1620
1608
1596
1584
1572
1560
1548
1536
1524
1512
1500
1488
L
1481
20

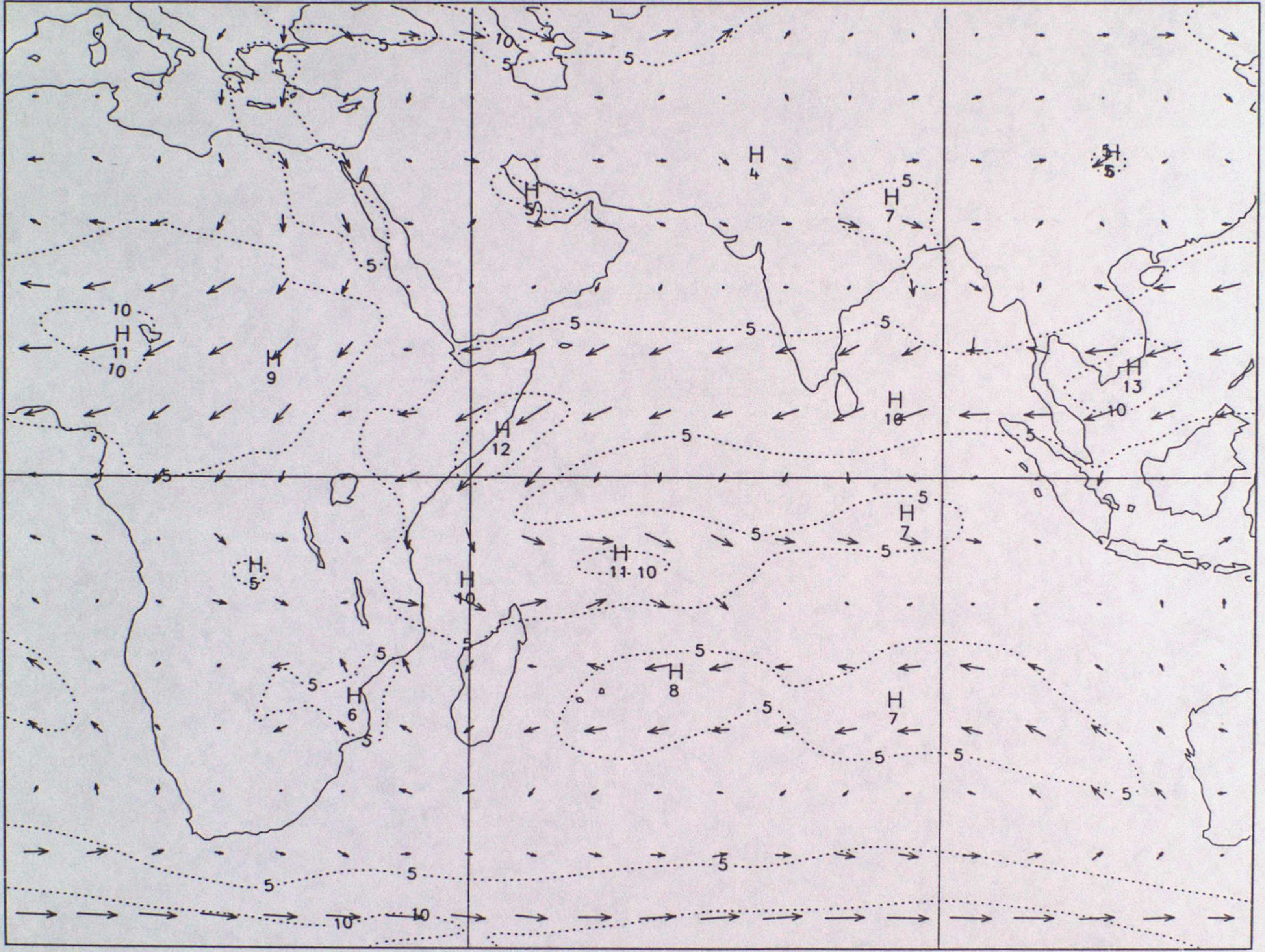
→ REPRESENTS 40 M/S   CONTOUR INTERVAL: 120 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   JANUARY   1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
LEVEL: 100 MB


L
1648
1656
1644
1632
1620
1608
1596
L
1584
H
1659
1656
L
1654
H
1657
H
1660
H
1660
L
1653
20

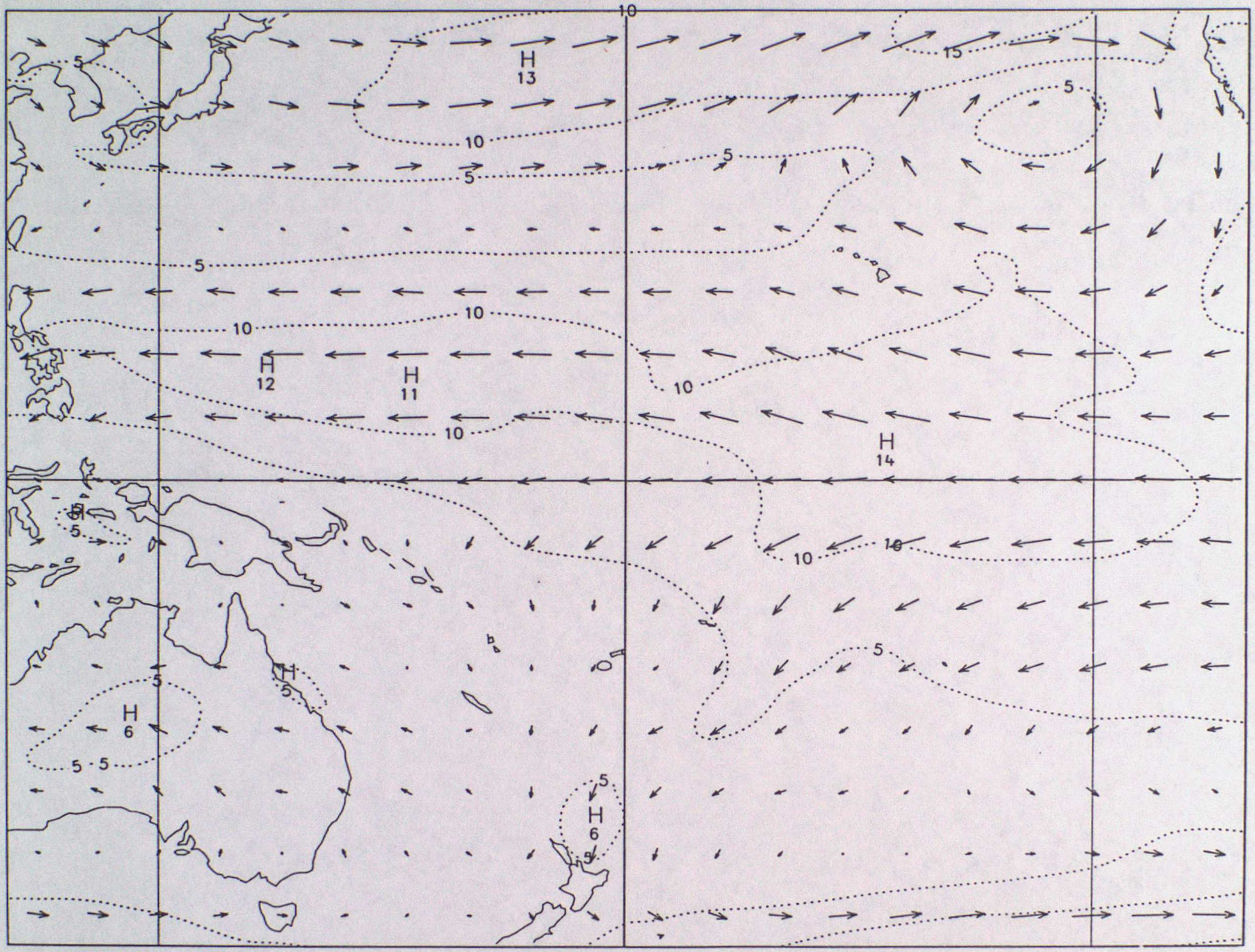
→ REPRESENTS 40 M/S   CONTOUR INTERVAL: 120 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   JANUARY   1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
850 MBS.   BETWEEN LONGS. 0 E - 120 E


H
4
H
5
H
7
H
11
H
9
H
12
H
10
H
13
H
5
H
10
H
11 10
H
7
H
6
H
8
H
7
5
10

→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS. JANUARY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
850 MBS. BETWEEN LONGS. 120 E - 120 W


10
H
13
15
5
10
5
5
5
10
10
H
12
H
11
10
10
H
14
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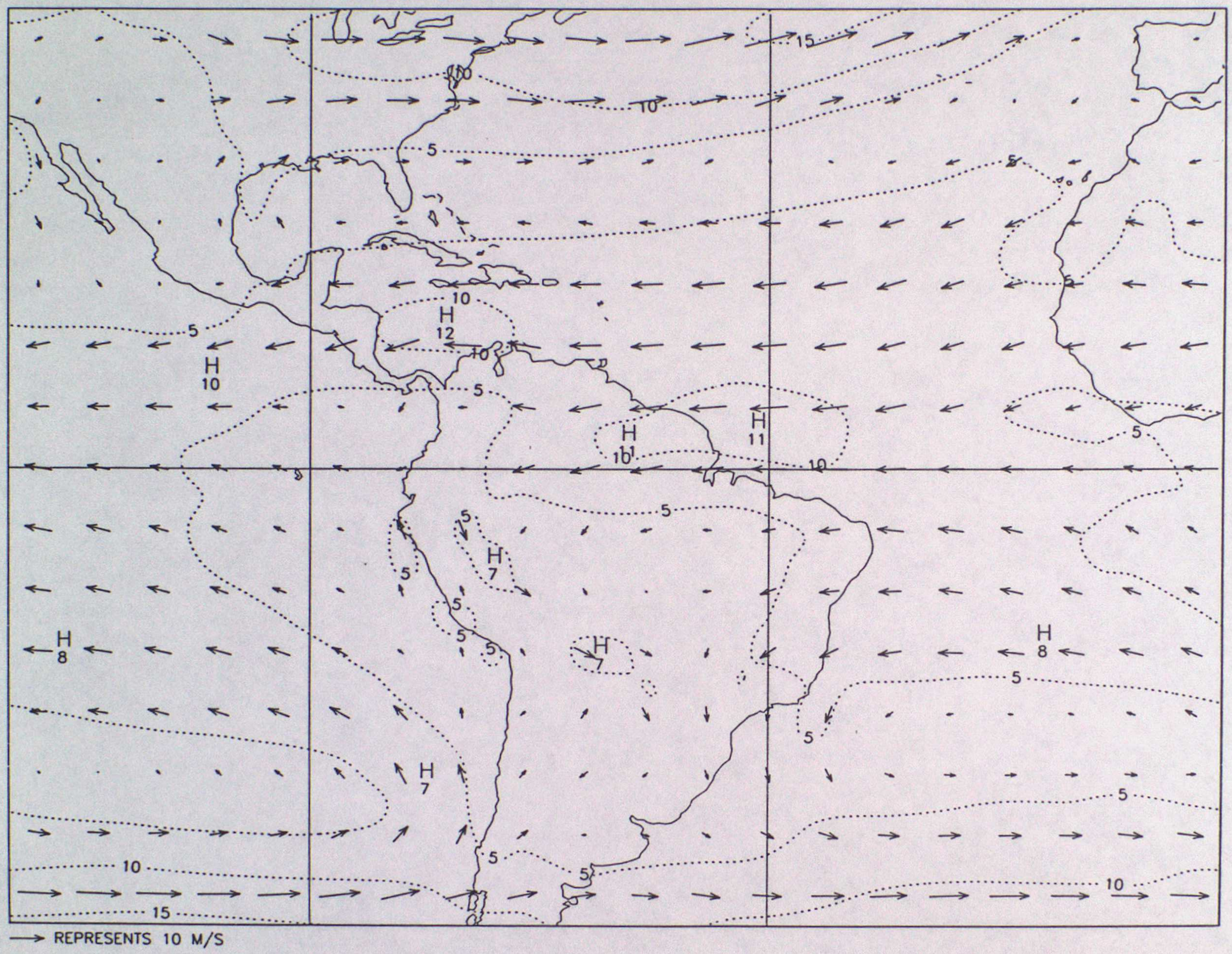
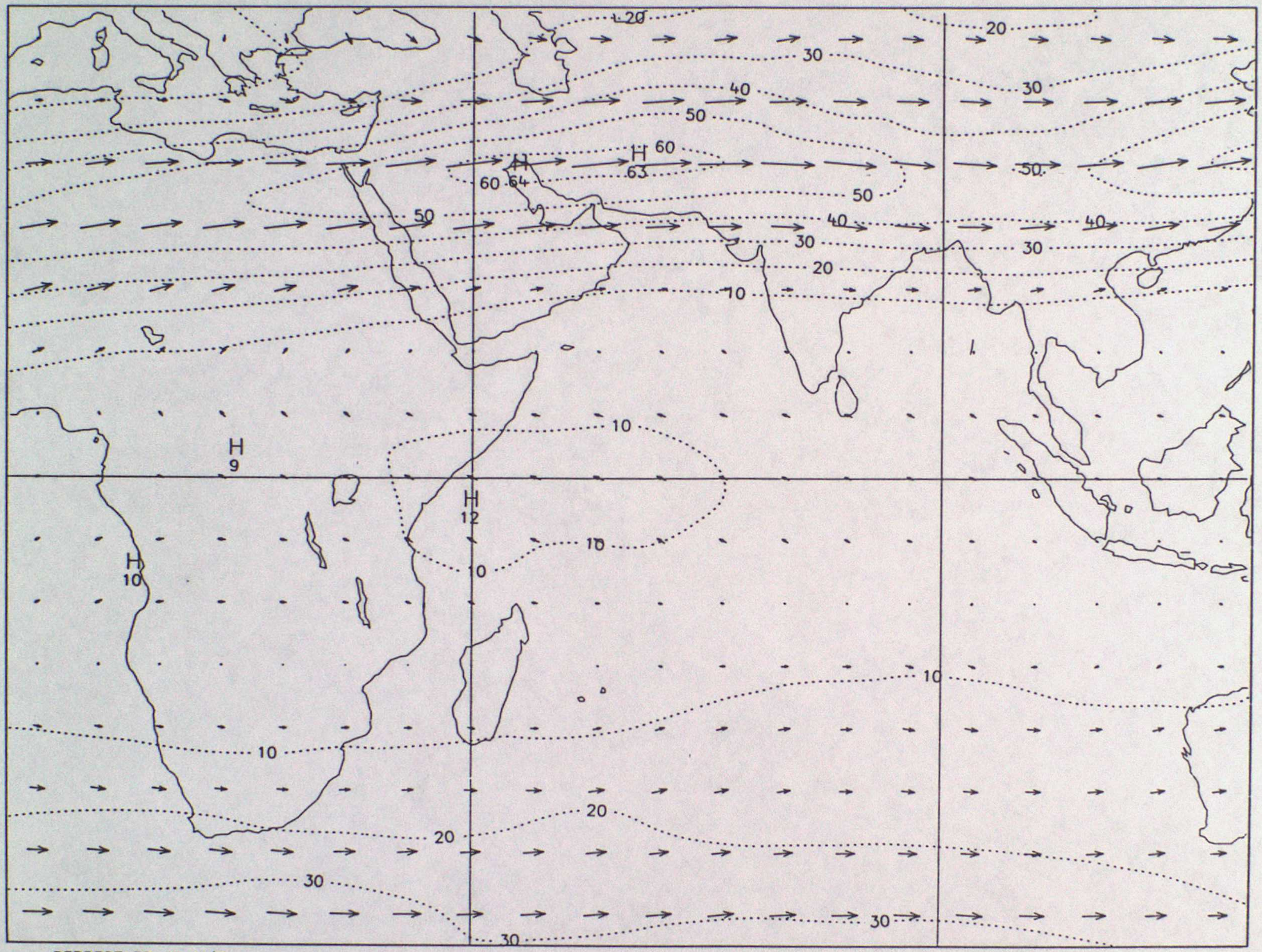
10
10
5
5
5
H
5
H
6
5
5
5
H
6
5

→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS. JANUARY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
850 MBS. BETWEEN LONGS. 120 W - 0 W


15
10
5
H 12
H 10
H 11
H 10
H 7
H 7
H 8
H 8
H 7
→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.   JANUARY   1989
WIND ARROWS AND ISOTACHS   BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
250 MBS.   BETWEEN LONGS. 0 E - 120 E


20
20
30
30
40
50
H 60 63
H 64
60
50
50
50
40
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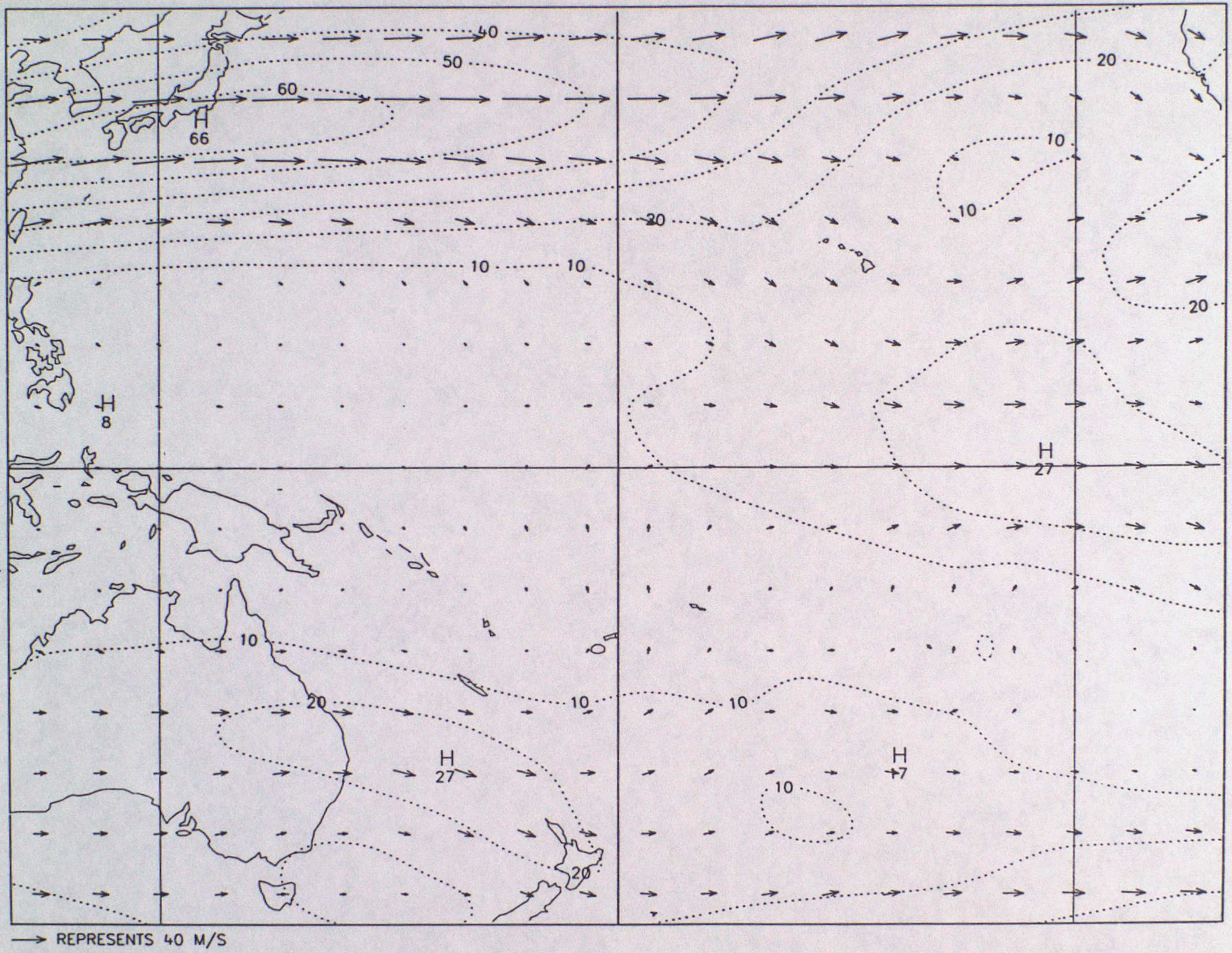
30
20
10
10
H 9
H 12
10
10
H 10
10
10
20
20
30
30
30

→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS.   JANUARY   1989
WIND ARROWS AND ISOTACHS   BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
250 MBS.   BETWEEN LONGS. 120 E - 120 W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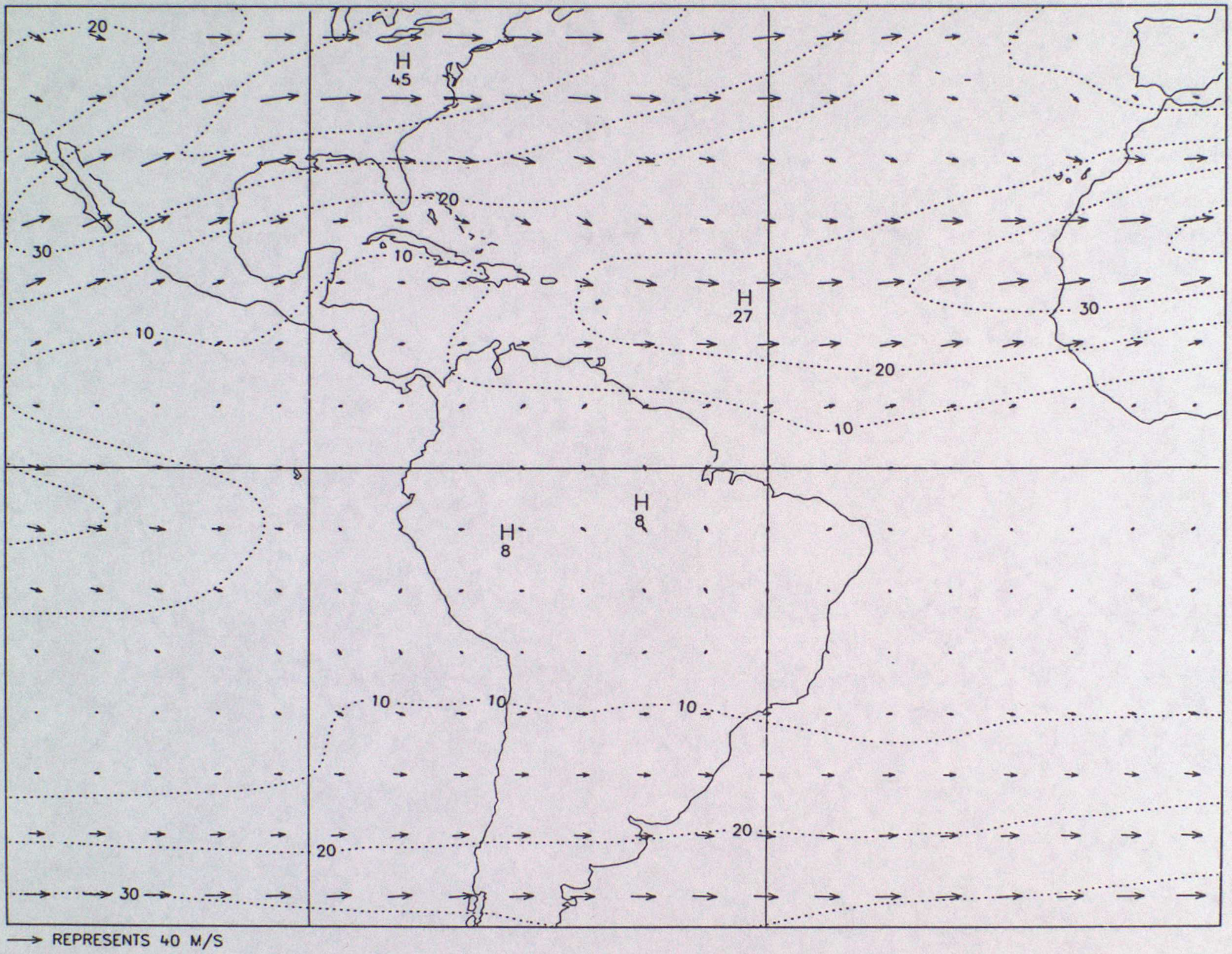
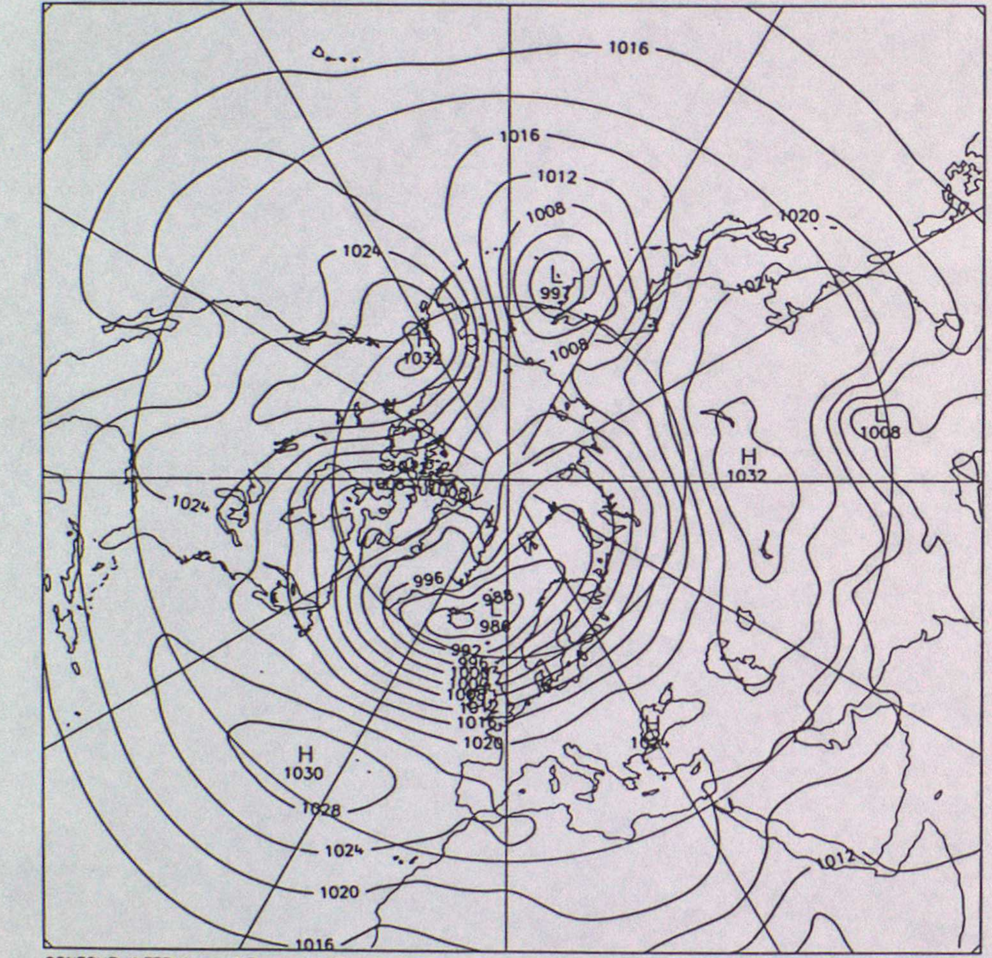
50
60
H
66
20
10
10
10
10
20
20
H
8
H
27
10
20
H
27
10
10
H
7
10
20
→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS. JANUARY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/1/1989 DAY 1 TO 12Z ON 31/1/1989 DAY 31
250 MBS. BETWEEN LONGS. 120 W - 0 W


20
H
45
20
30
10
H
27
30
10
20
10
H
8
H
8
10
10
10
20
20
30
→ REPRESENTS 40 M/S

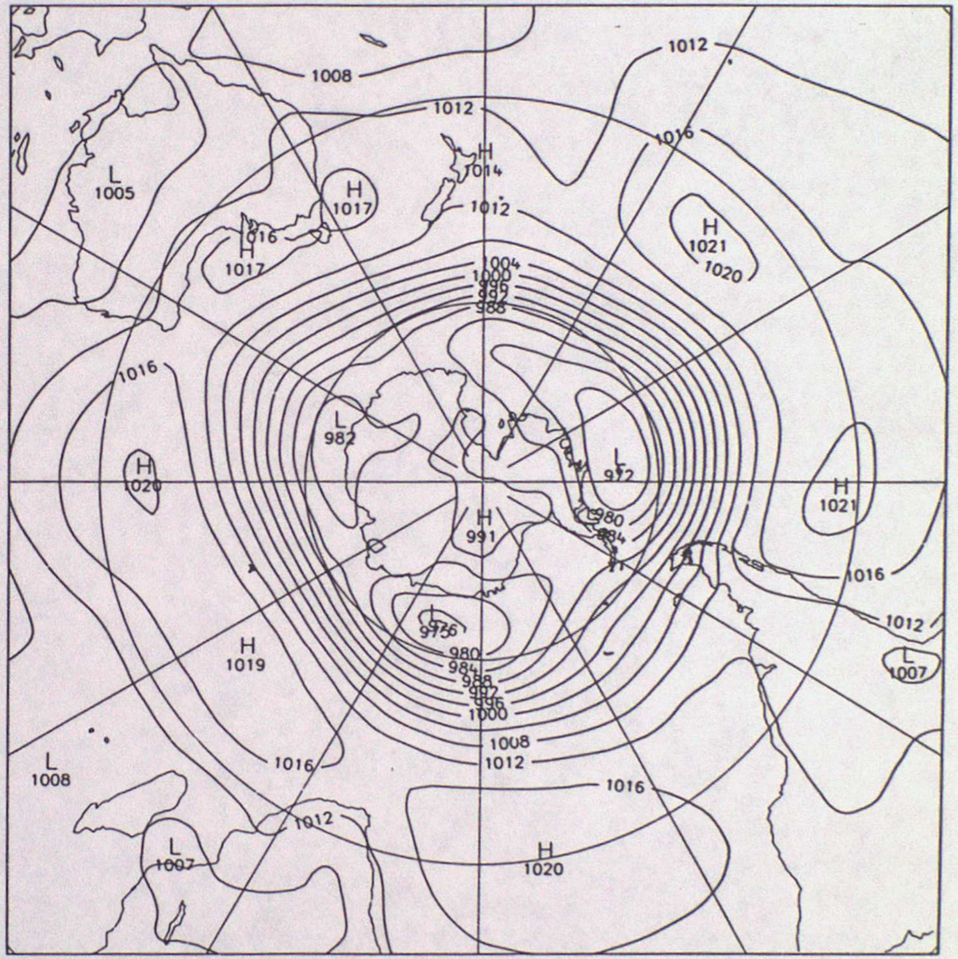
FEBRUARY
1989

OPERATIONAL ARCHIVE MEANS.   FEBRUARY   1989
PMSL
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
SEA LEVEL


1016
1016
1012
1008
L
997
1008
1020
1024
1024
H
1032
1024
L
1008
H
1032
996
988
L
986
992
1016
1020
H
1030
1028
1024
1020
1016
1012

CONTOUR INTERVAL: 4 MB   UNITS: MB

OPERATIONAL ARCHIVE MEANS.   FEBRUARY   1989
PMSL
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
SEA LEVEL


1008
1012
1012
1016
L
1005
H
1017
H
1014
1012
H
1017
1016
H
1021
1020
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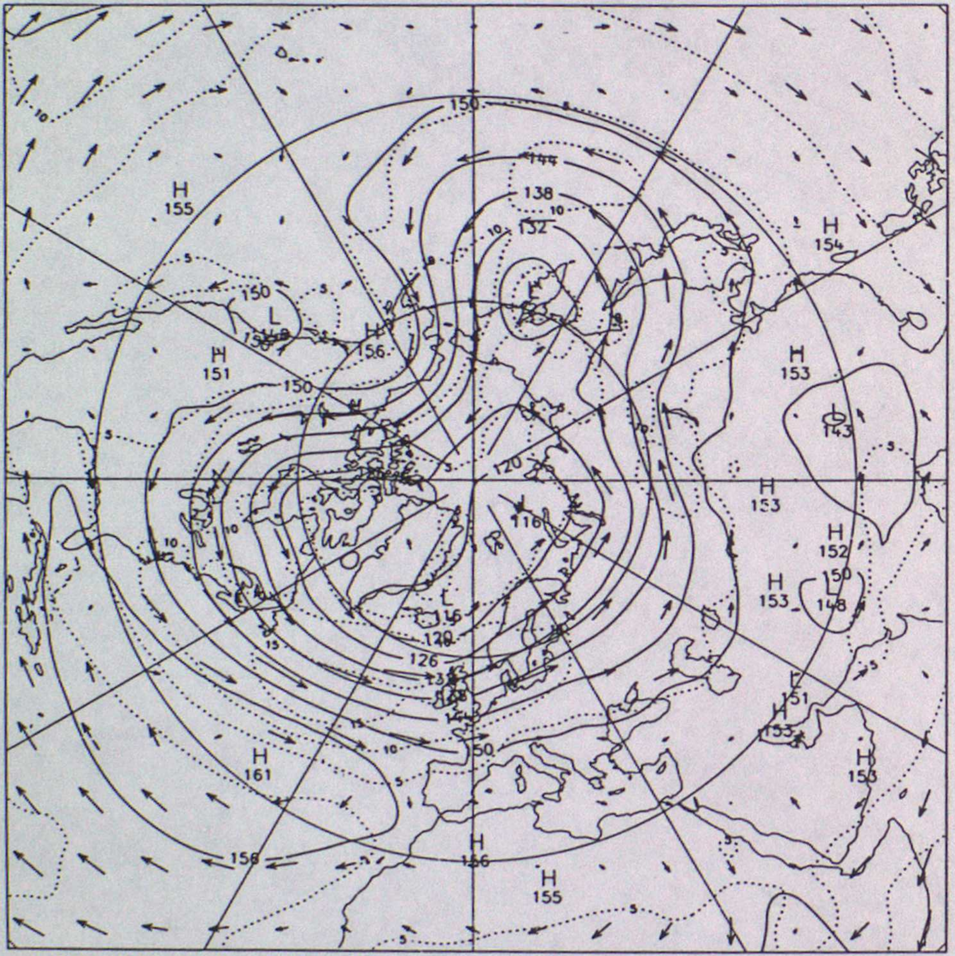
1000
996
992
988
1016
L
982
H
1020
L
972
H
991
980
984
H
1021
1016
1012
L
1007
L
976
980
984
988
992
996
1000
1008
1012
H
1019
L
1008
1016
1016
1012
L
1007
H
1020

CONTOUR INTERVAL: 4 MB   UNITS: MB

OPERATIONAL ARCHIVE MEANS.   FEBRUARY   1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 850 MB


H 155
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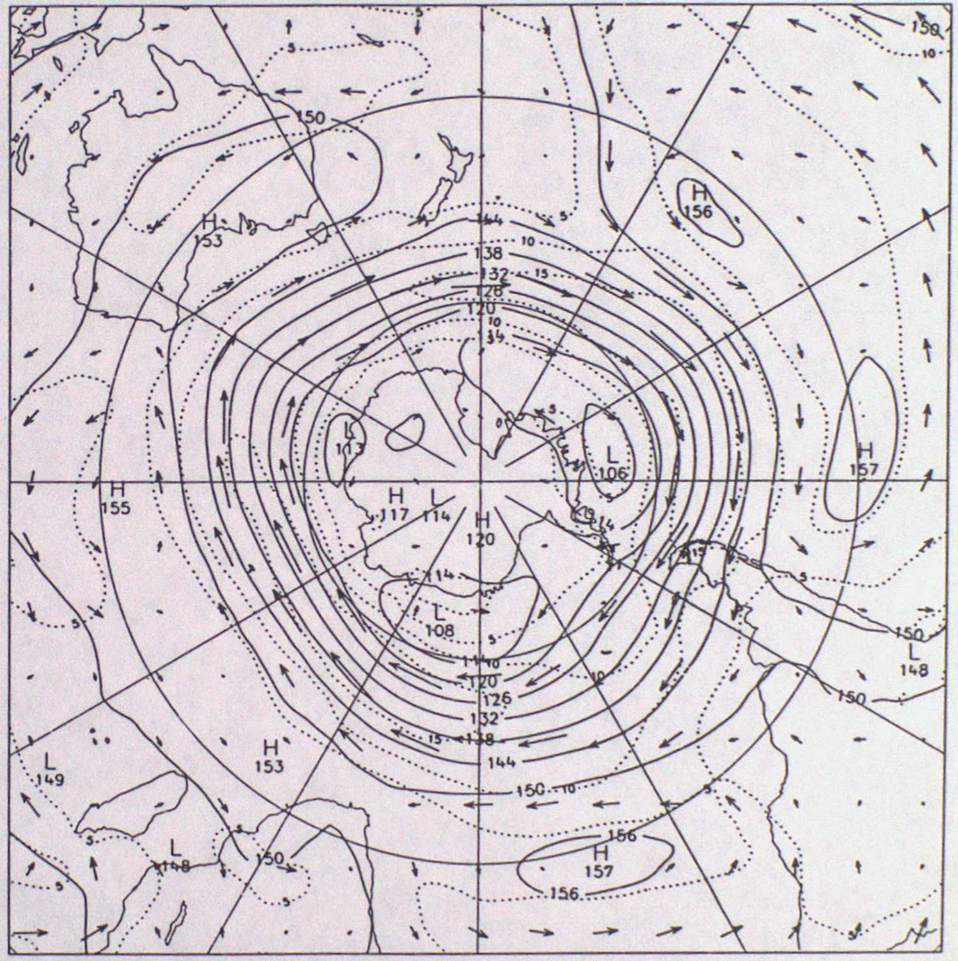
116
126
L 116
H 161
156
H 156
H 155
H 154
H 153
L 143
H 153
H 152
H 153
L 148
L 151
H 153
H 153

→ REPRESENTS 10 M/S   CONTOUR INTERVAL: 60 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   FEBRUARY   1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 850 MB


150
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H 156
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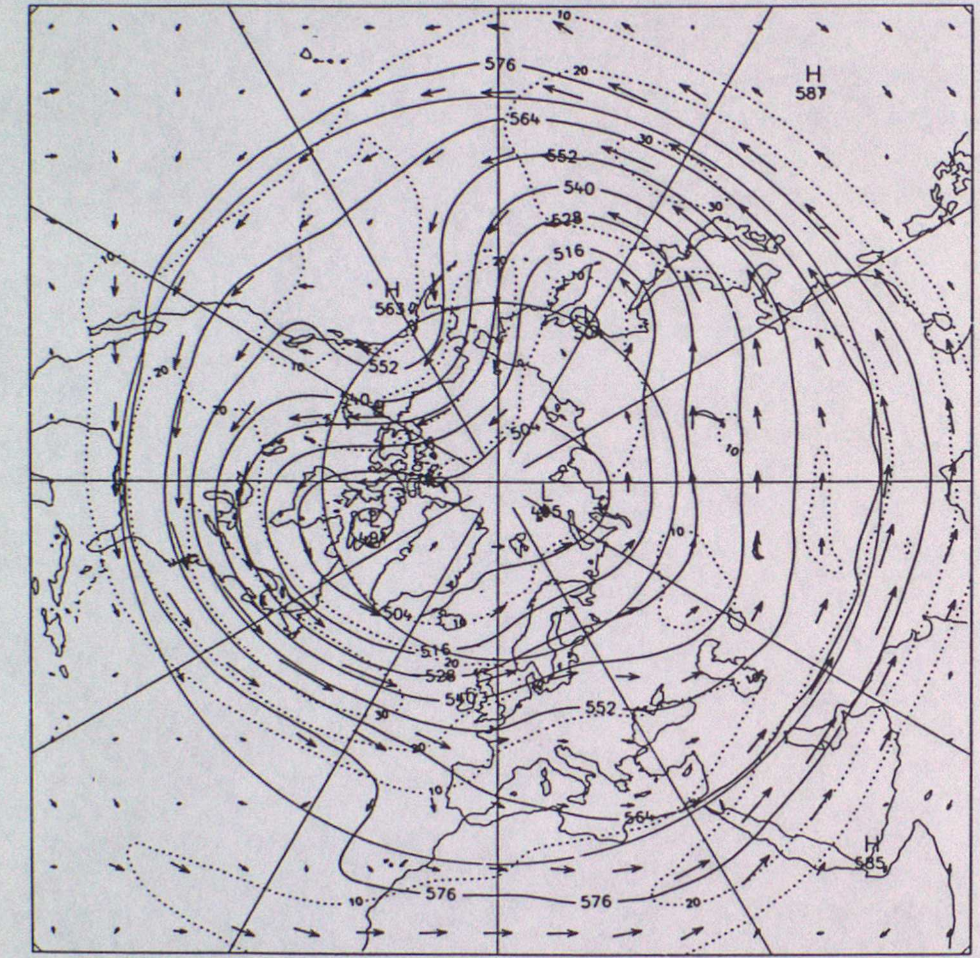
138
132
126
120
L 113
L 106
H 157
H 155
H 117
L 114
H 120
L 108
144
L 148
150
L 149
H 153
L 148
H 157
156

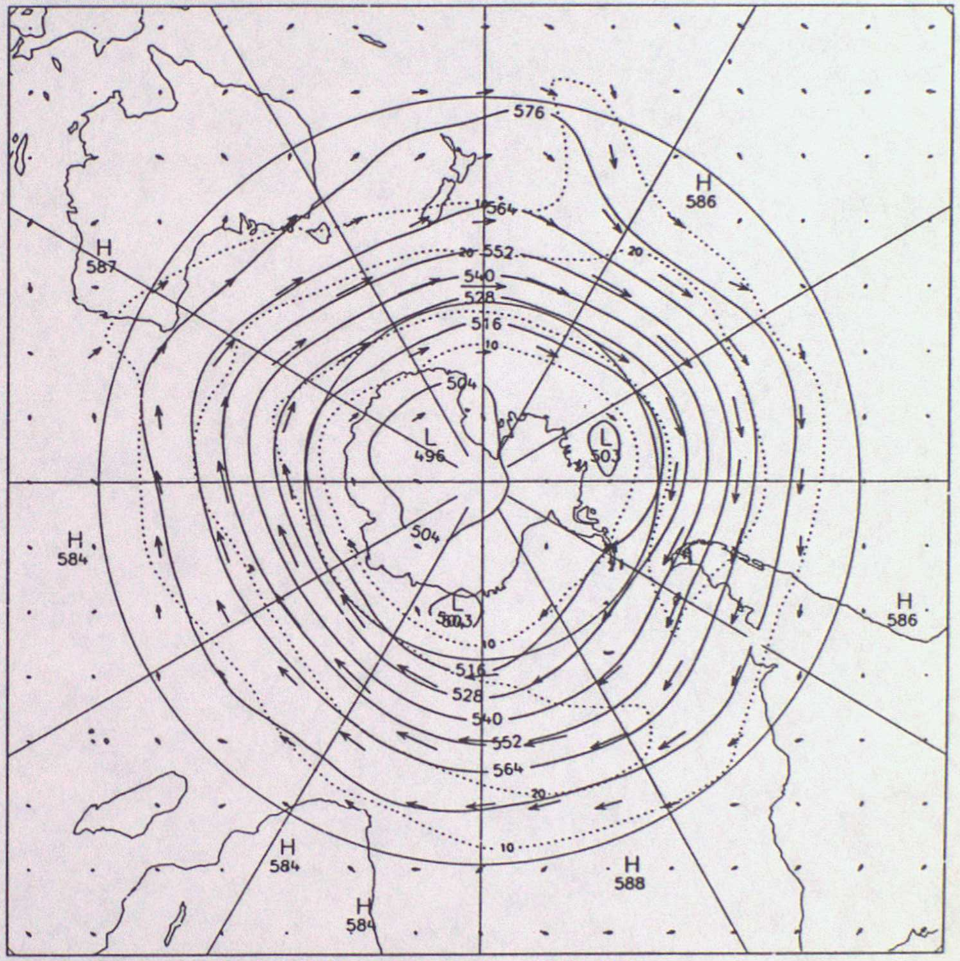
→ REPRESENTS 10 M/S   CONTOUR INTERVAL: 60 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. FEBRUARY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 500 MB


576
564
552
540
528
516
504
L
485
H
587
H
563
H
585
10
20
30

→ REPRESENTS 20 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. FEBRUARY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 500 MB


576
564
552
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528
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504
L
496
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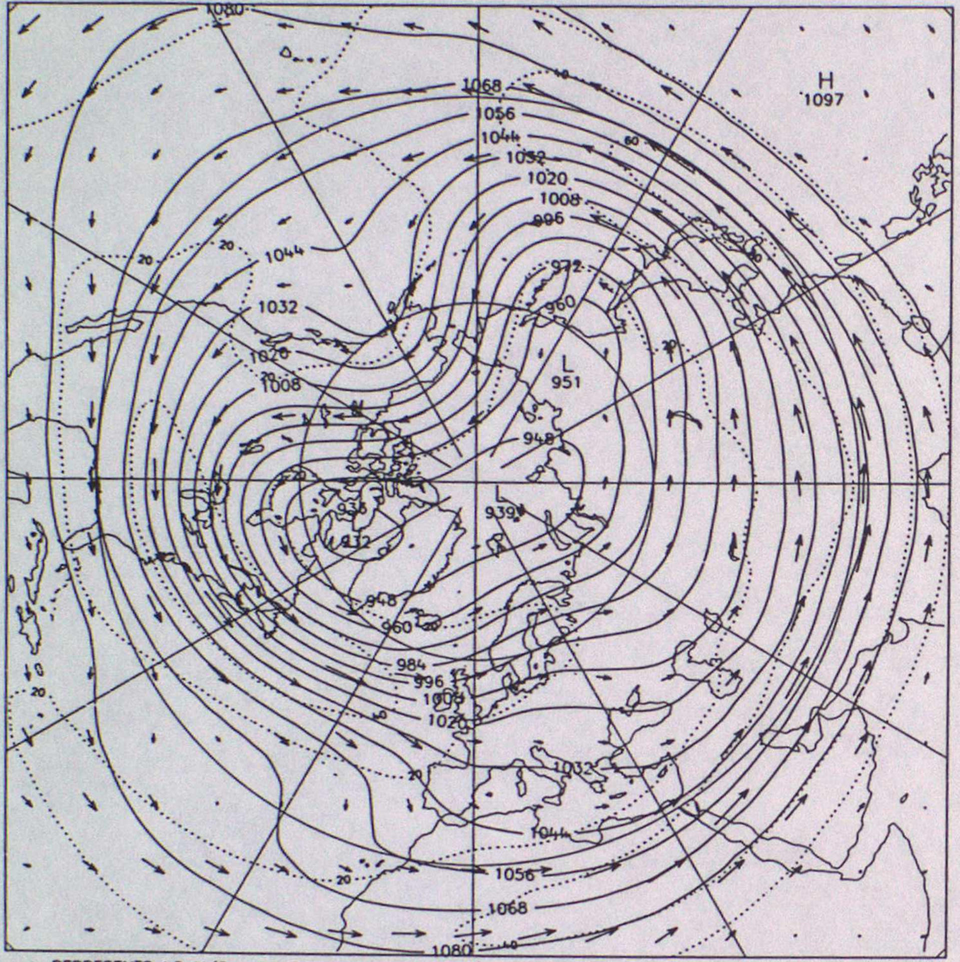
503
L
503
H
586
H
587
H
584
H
586
H
584
H
584
H
588
10
20

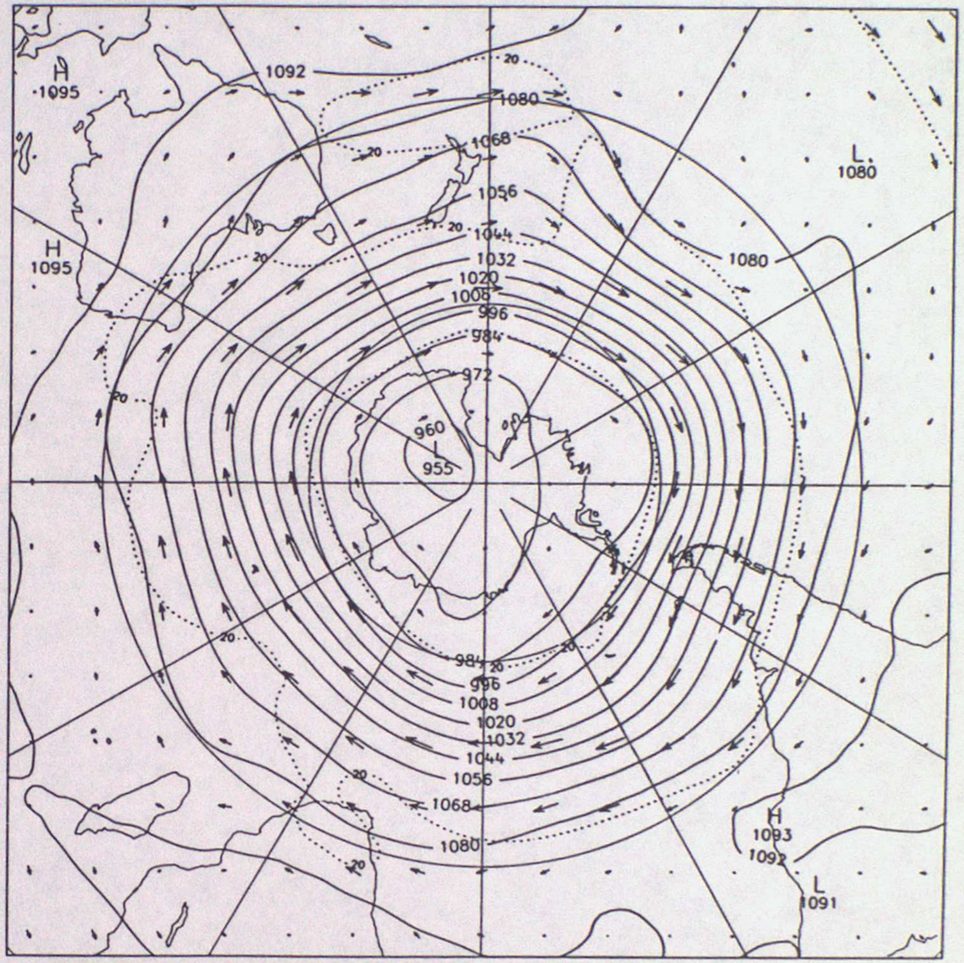
→ REPRESENTS 20 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   FEBRUARY   1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 250 MB


H
1097
L
951
1080
1068
1056
1044
1032
1020
1008
996
972
960
948
939
936
932
984
20
40
60

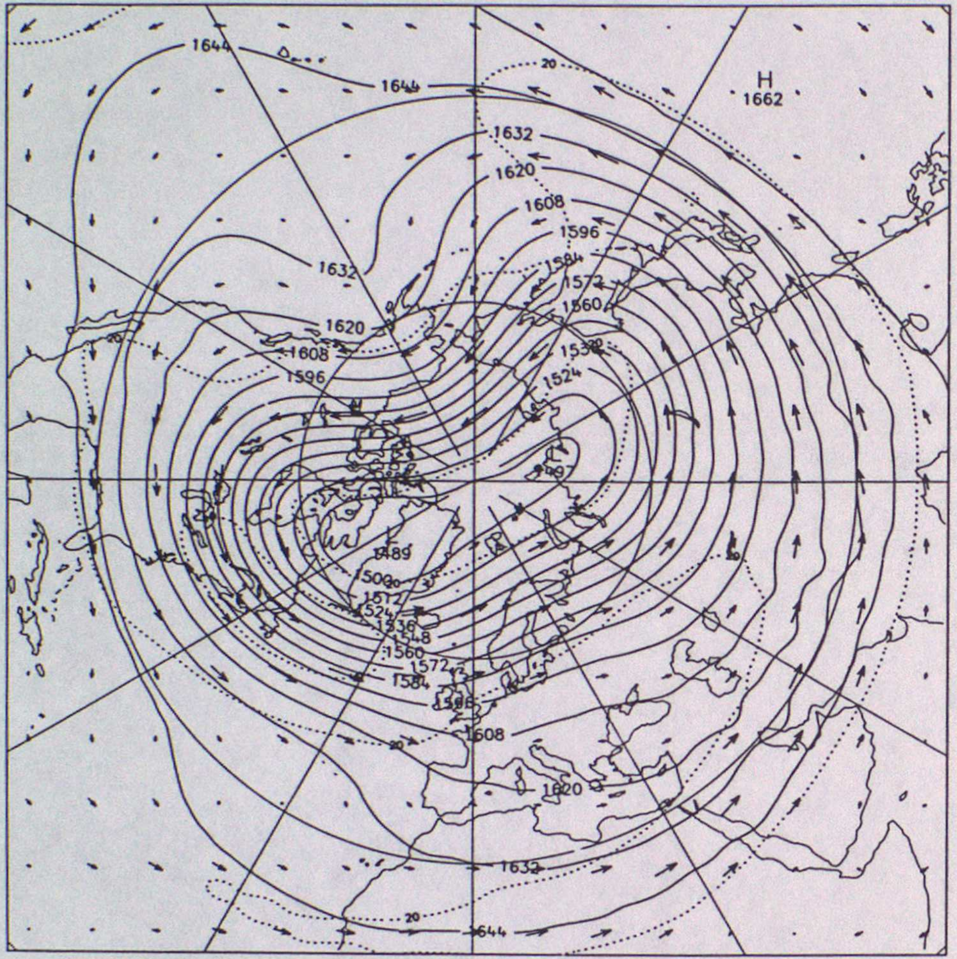
→ REPRESENTS 40 M/S   CONTOUR INTERVAL: 120 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   FEBRUARY   1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 250 MB


H
1095
L
1080
L
960
955
H
1093
1092
L
1091
1092
1080
1068
1056
1044
1032
1020
1008
996
984
972
20

→ REPRESENTS 40 M/S   CONTOUR INTERVAL: 120 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. FEBRUARY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 100 MB



H
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1644
1632
1620
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1584
1572
1560
1536
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1512
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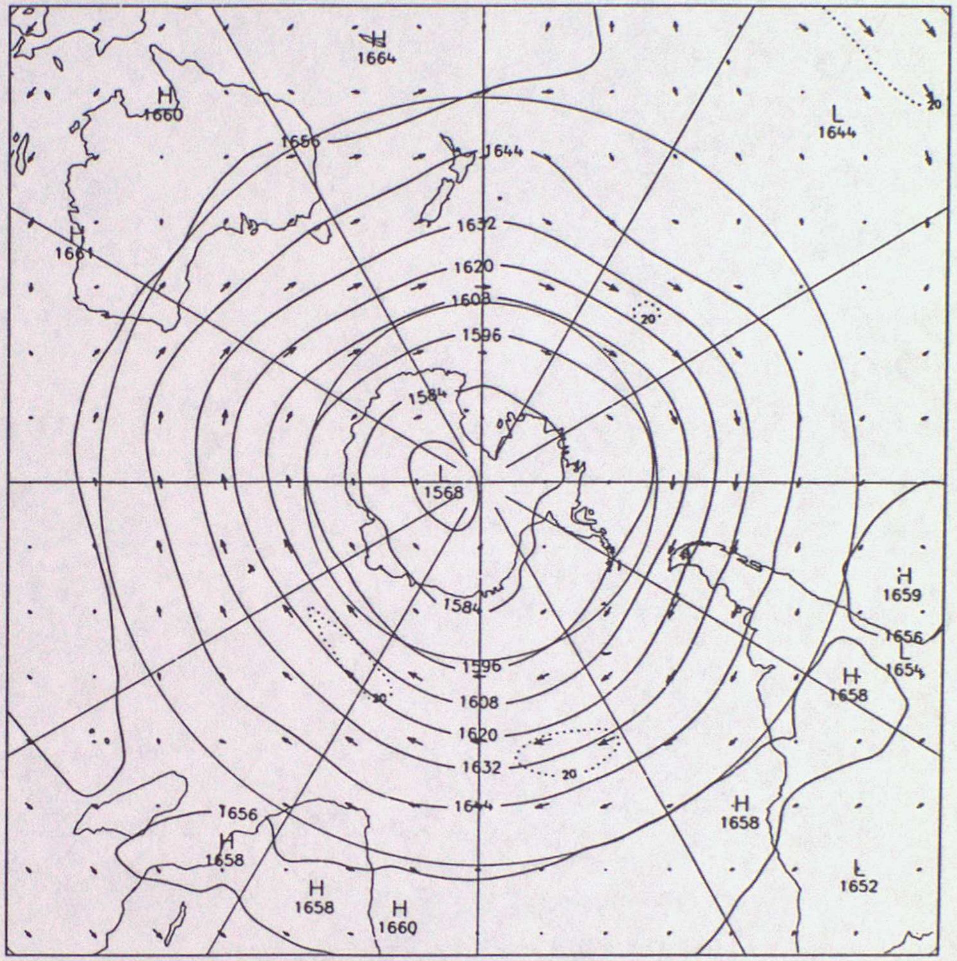
1489
L
1548
1620
20

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. FEBRUARY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 100 MB



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1664
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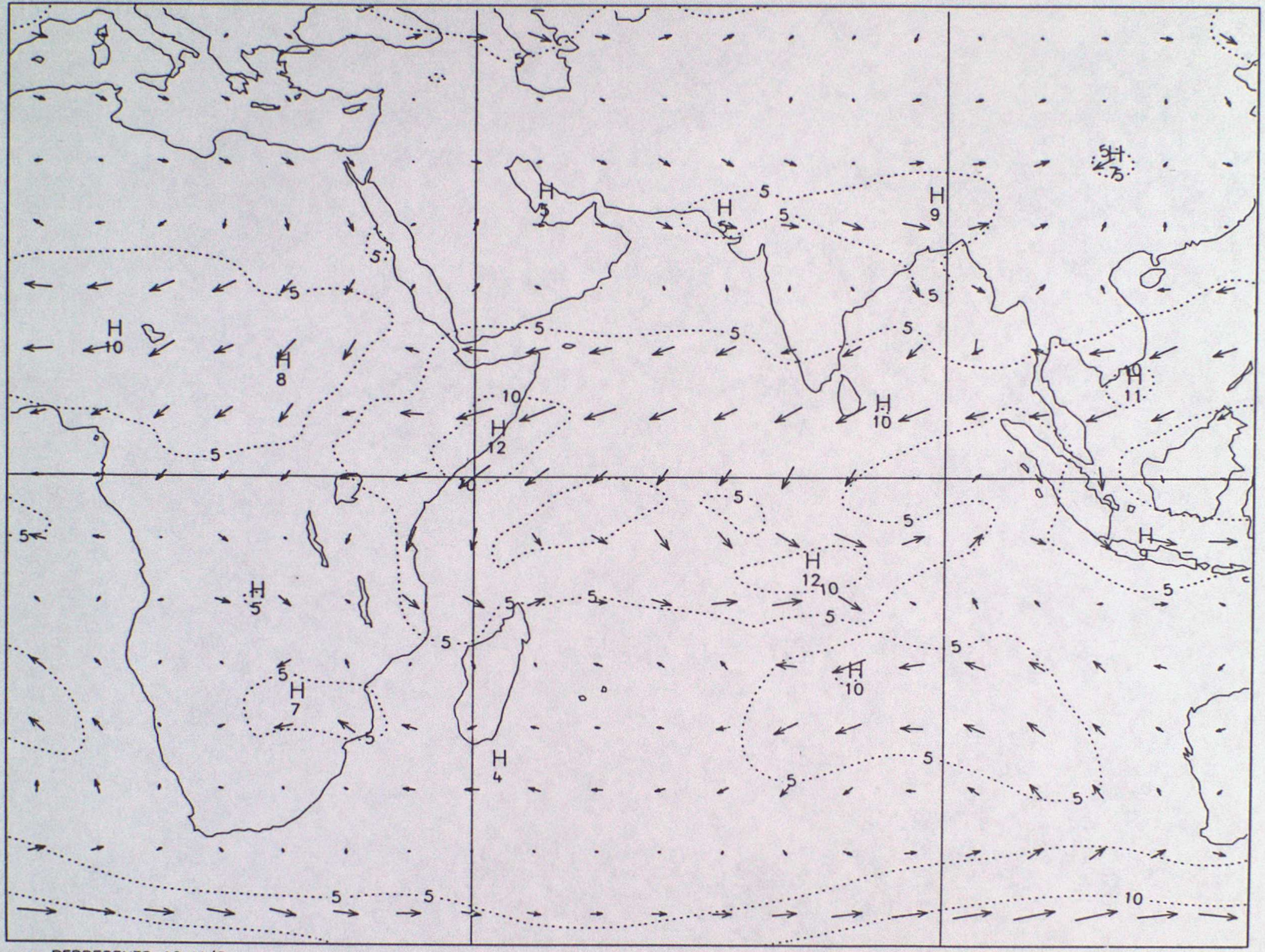
L
1654
H
1658
1596
1608
1620
1632
1644
H
1658
1656
H
1658
H
1658
H
1660
L
1652

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATICNAL ARCHIVE MEANS.   FEBRUARY   1989
WIND ARROWS AND ISOTACHS   BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM   0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
850 MBS.   BETWEEN LONGS. 0 E - 120 E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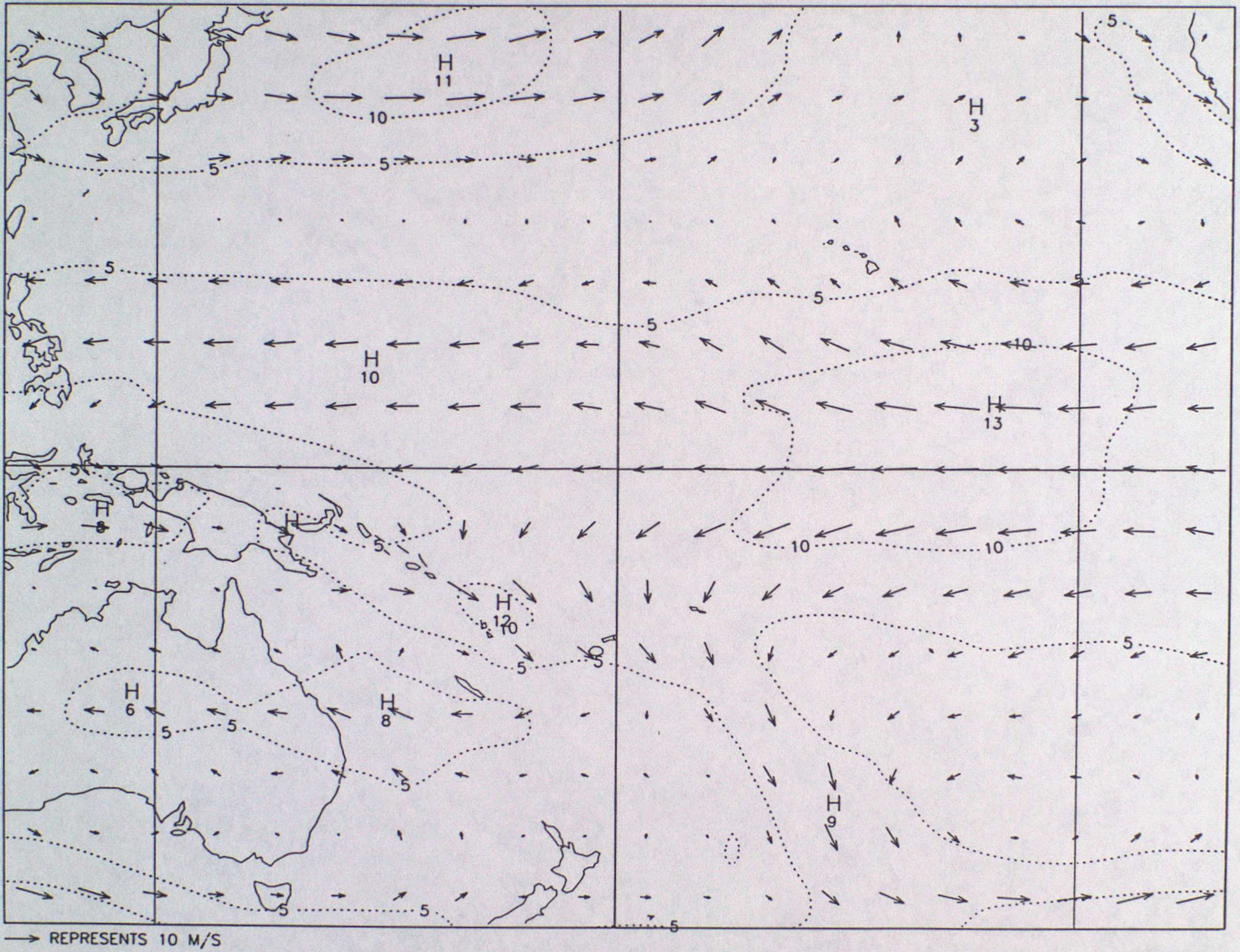
12
10
H
5
H
7
H
4
H
5
H
9
H
10
H
11
H
12
10
H
10
5

→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.   FEBRUARY   1989
WIND ARROWS AND ISOTACHS   BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM   0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
850 MBS.   BETWEEN LONGS. 120 E - 120 W


H
11
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10
H
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12
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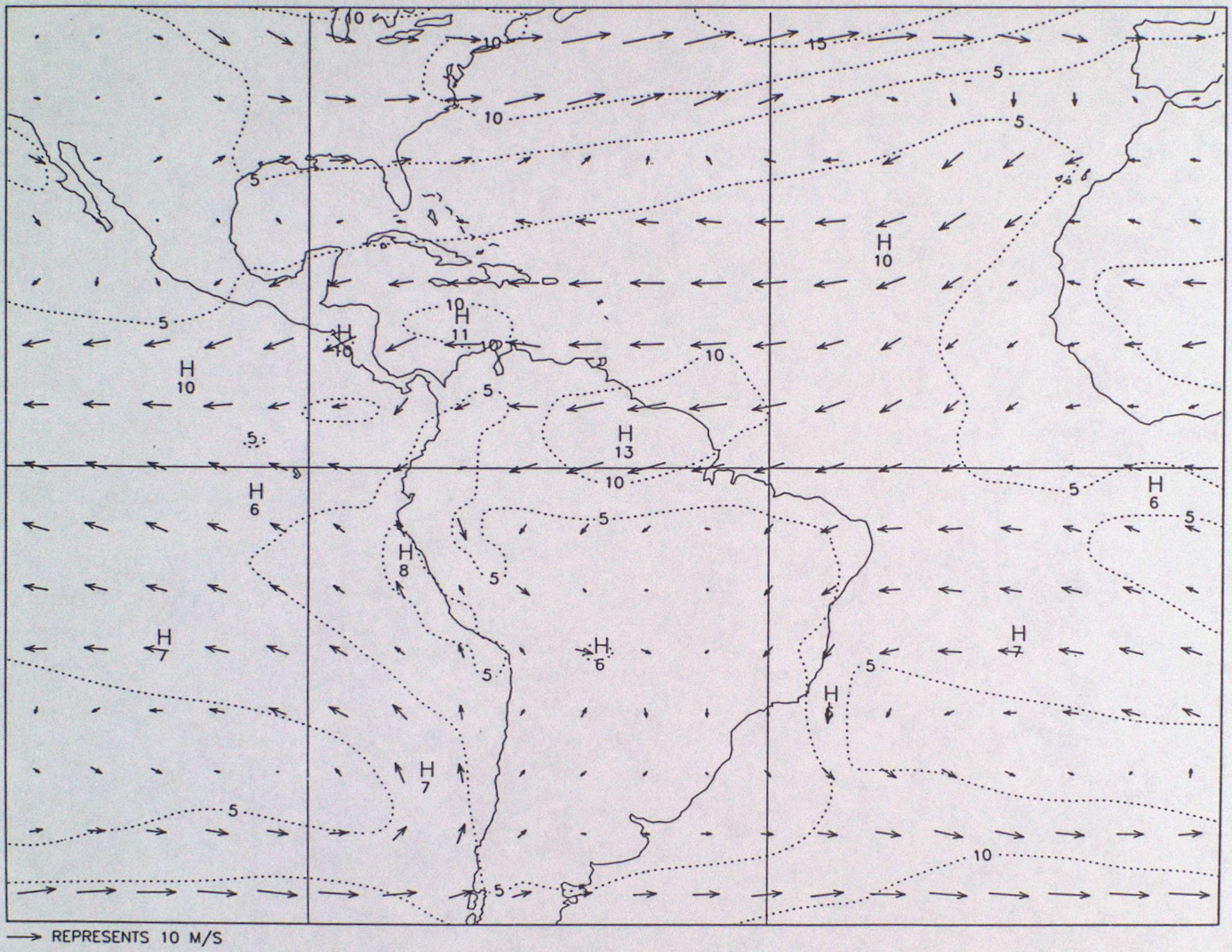
8
H
6
H
9
REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS. FEBRUARY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
850 MBS. BETWEEN LONGS. 120 W - 0 W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13
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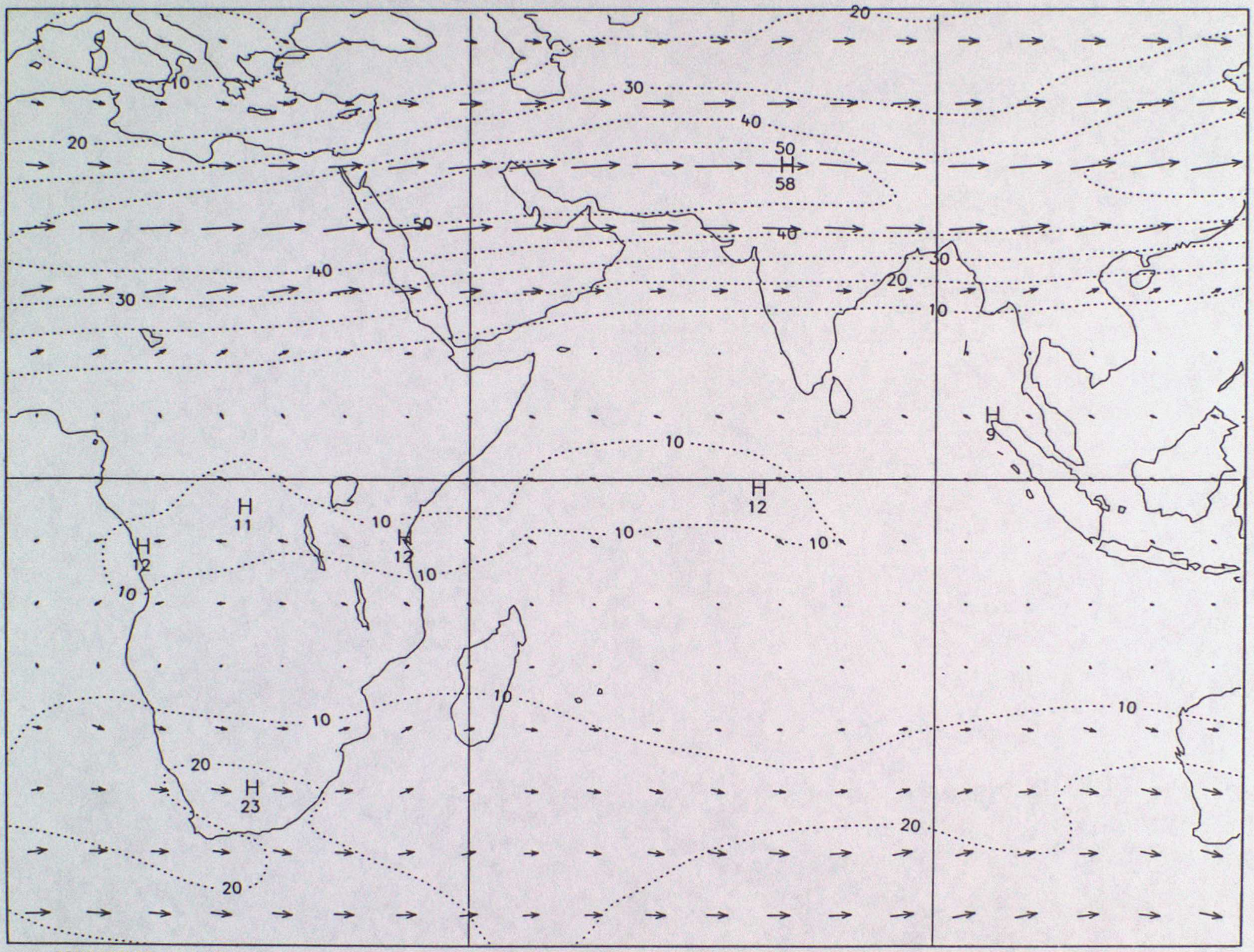
H
7
H
6
→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS. FEBRUARY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
250 MBS. BETWEEN LONGS. 0 E - 120 E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H
9
H
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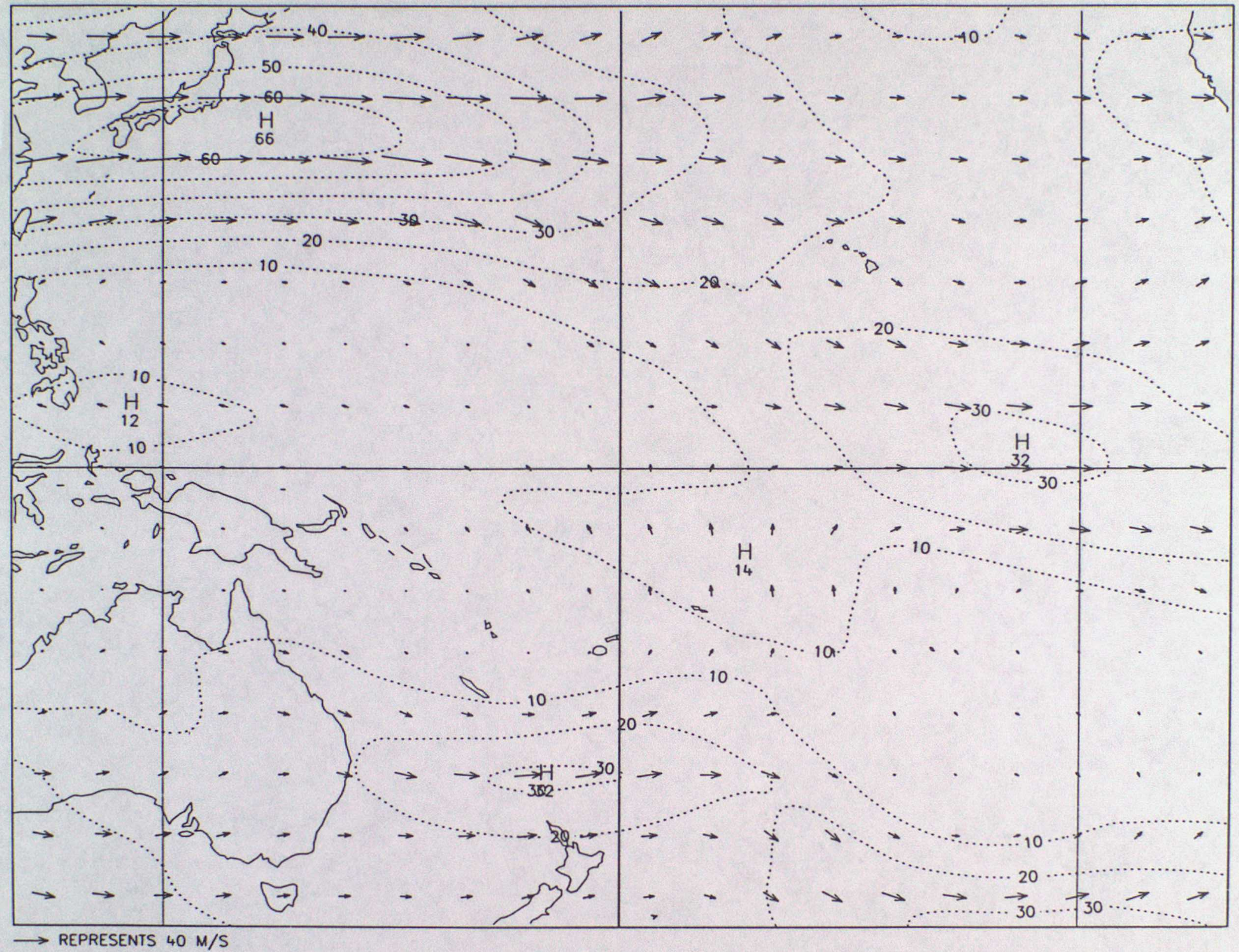
H
12
10
H
12
10
H
12
10
10
10
10
10
10
20
H
23
20
20

→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS.   FEBRUARY   1989
WIND ARROWS AND ISOTACHS   BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM   0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
250 MBS.   BETWEEN LONGS. 120 E - 120 W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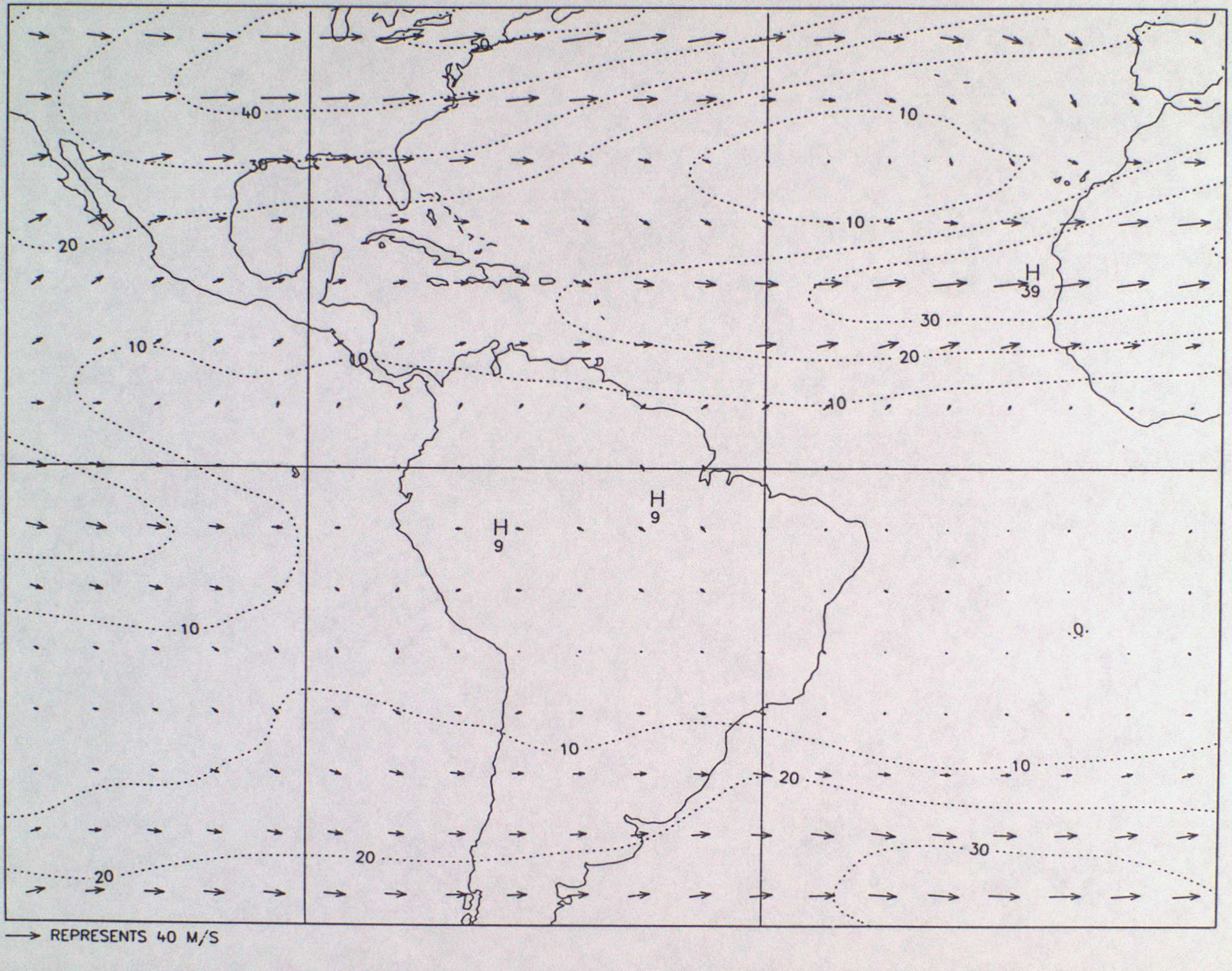
10
H
14
10
10
10
20
H
32
30
20
10
20
30
30
→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS. FEBRUARY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/2/1989 DAY 32 TO 12Z ON 28/2/1989 DAY 59
250 MBS. BETWEEN LONGS. 120 W - 0 W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H
39
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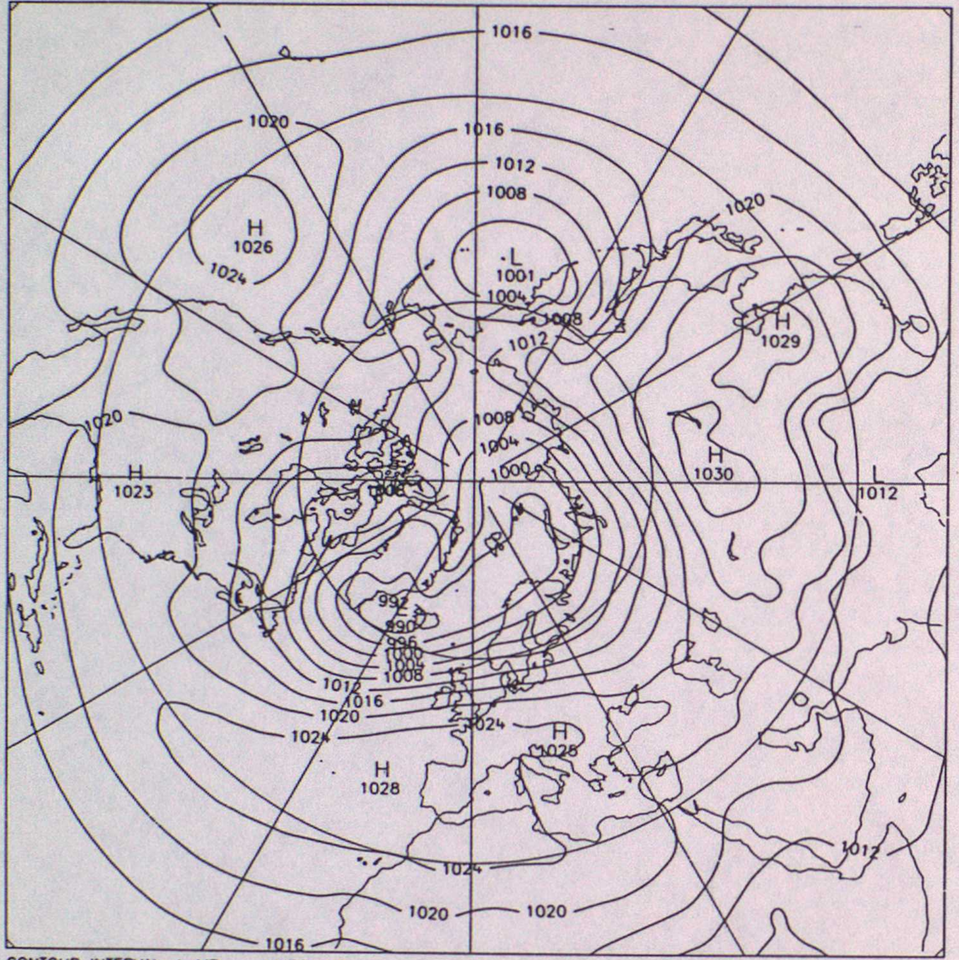
10
H
9
H
9
0
10
20
10
30
20
→ REPRESENTS 40 M/S

DECEMBER/JANUARY/FEBRUARY
1988/89

OPERATIONAL ARCHIVE MEANS. DEC/JAN/FEB1989
PMSL
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
SEA LEVEL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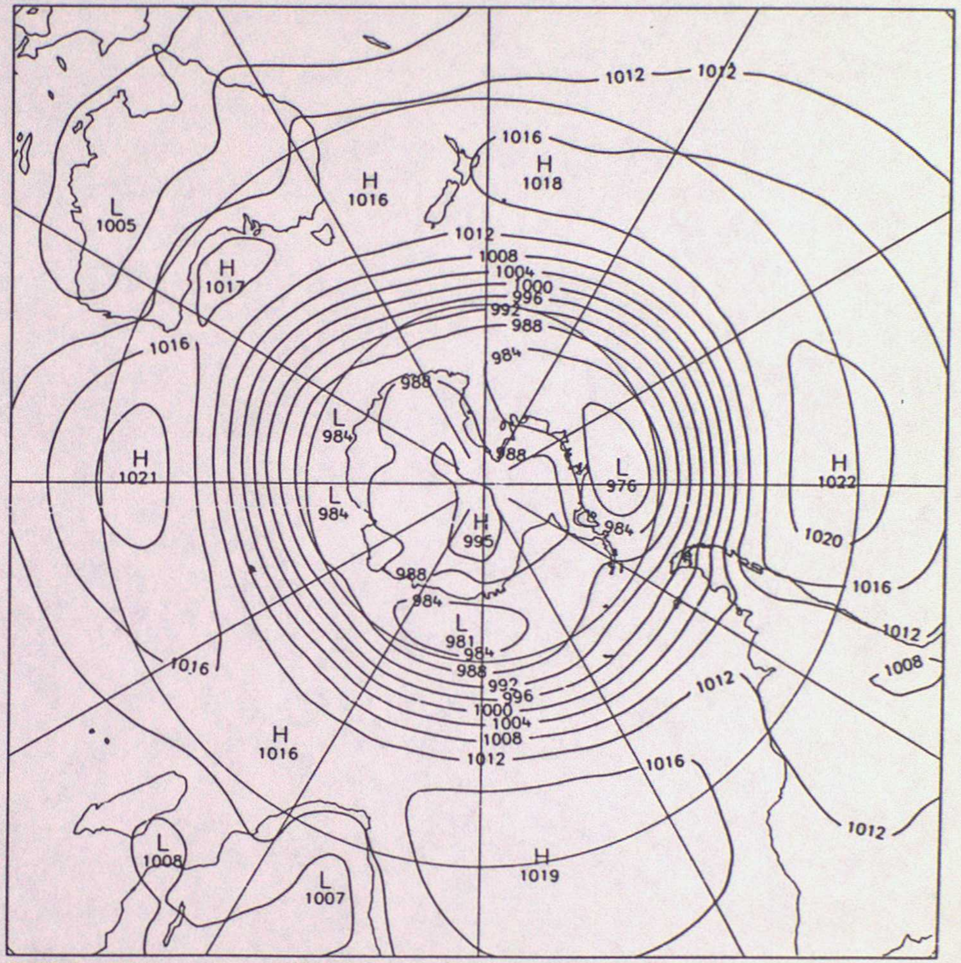
1012
992
990
996
1000
1004
1008
1012
1016
1020
1024
1024
H
1028
H
1028
1012
1024
1020
1020
1016

CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS. DEC/JAN/FEB1989
PMSL
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
SEA LEVEL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992
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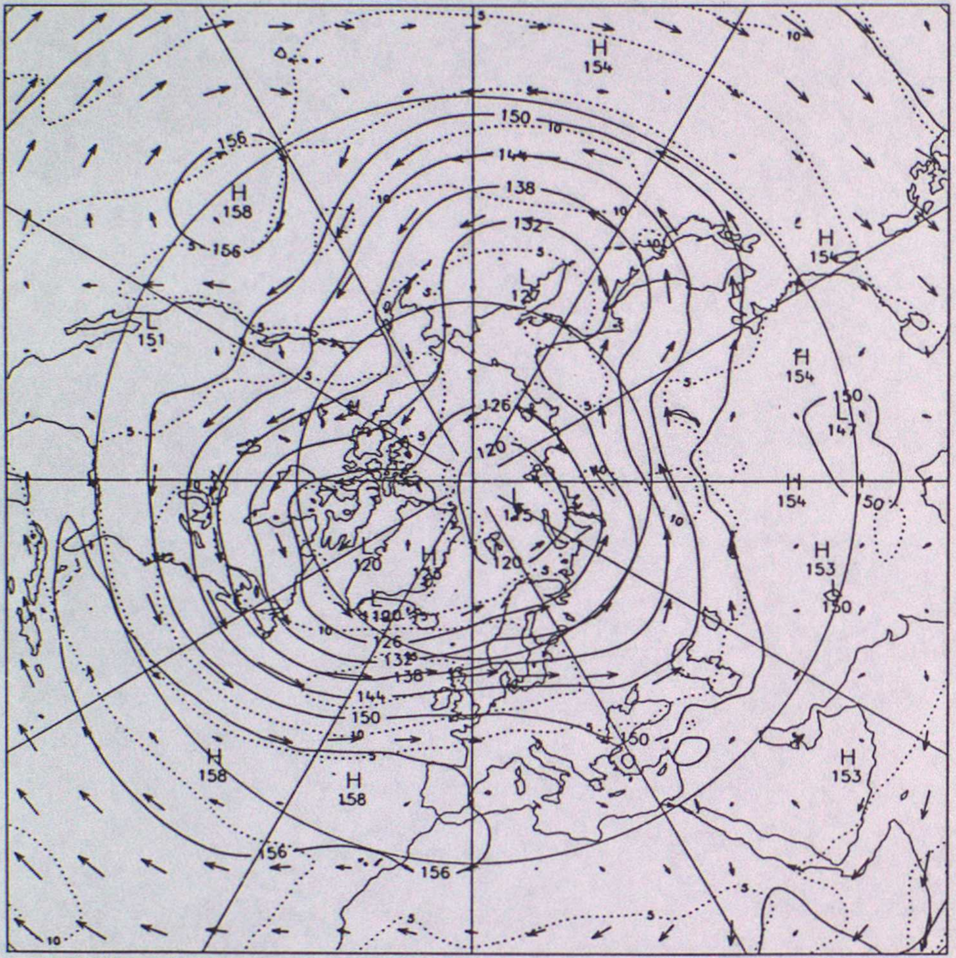
984
1016
988
L
984
H
1021
L
984
988
L
976
984
H
995
H
1022
1020
1016
988
984
L
981
984
988
992
996
1000
1004
1008
1012
1016
1012
1008
1012
1016
H
1016
1016
1012
L
1008
L
1007
H
1019

CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS. DEC/JAN/FEB1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 850 MB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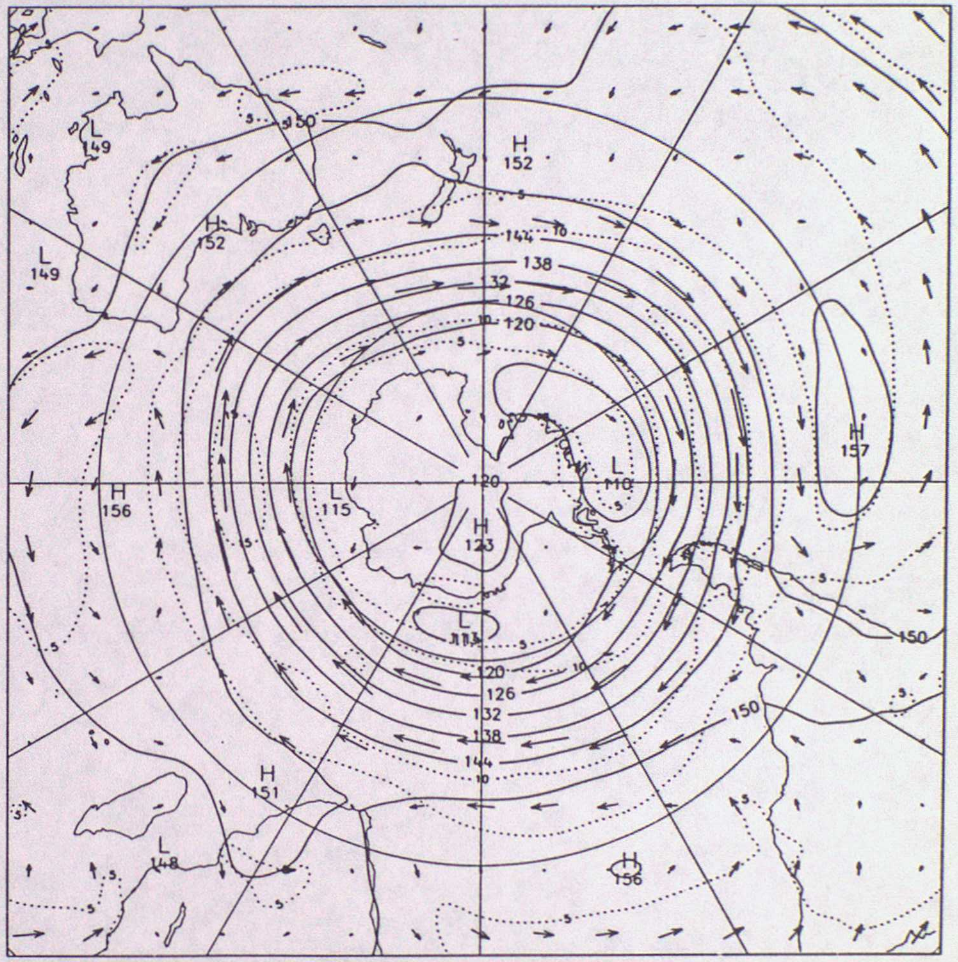
H 154
L 147
H 154
H 153
150
H 158
H 158
H 153
156
10
5

→ REPRESENTS 10 M/S CONTOUR INTERVAL: 60 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. DEC/JAN/FEB1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 850 MB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H 157
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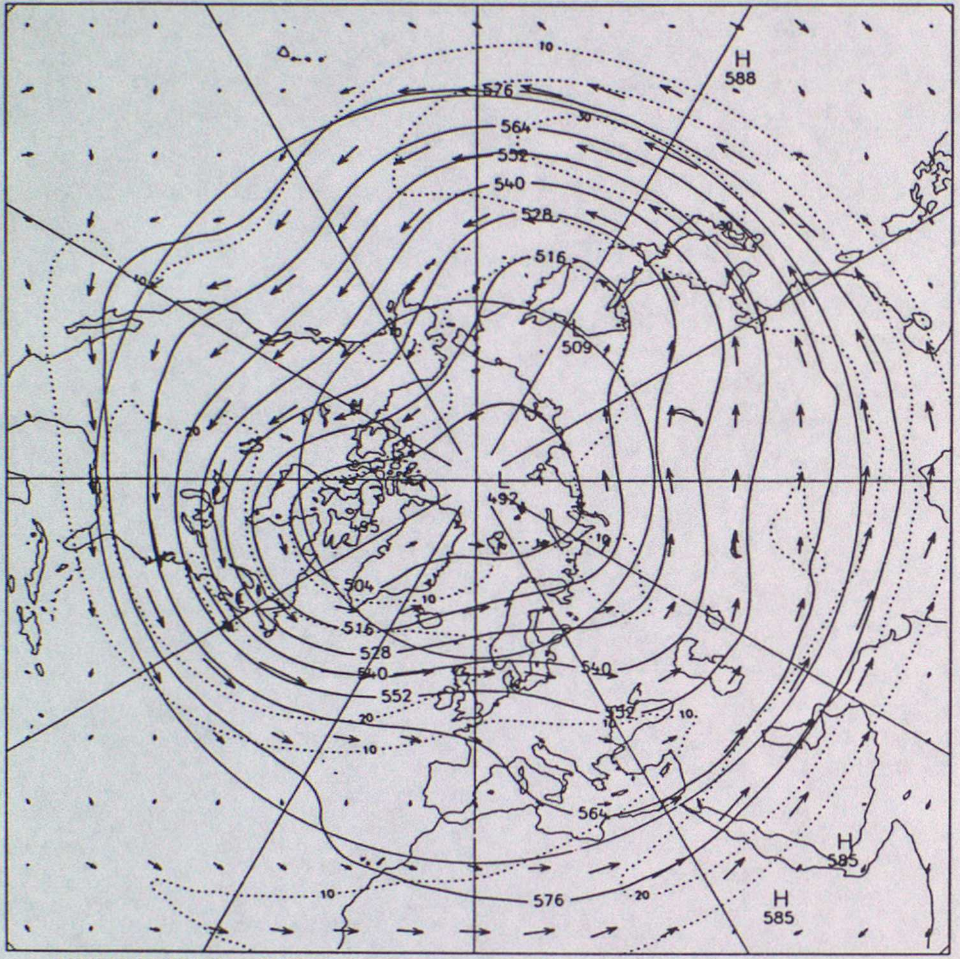
L 115
H 123
L 113
150
H 151
L 148
H 156
10
5

→ REPRESENTS 10 M/S CONTOUR INTERVAL: 60 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   DEC/JAN/FEB1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 500 MB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588
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516
509
L
492
495
504
516
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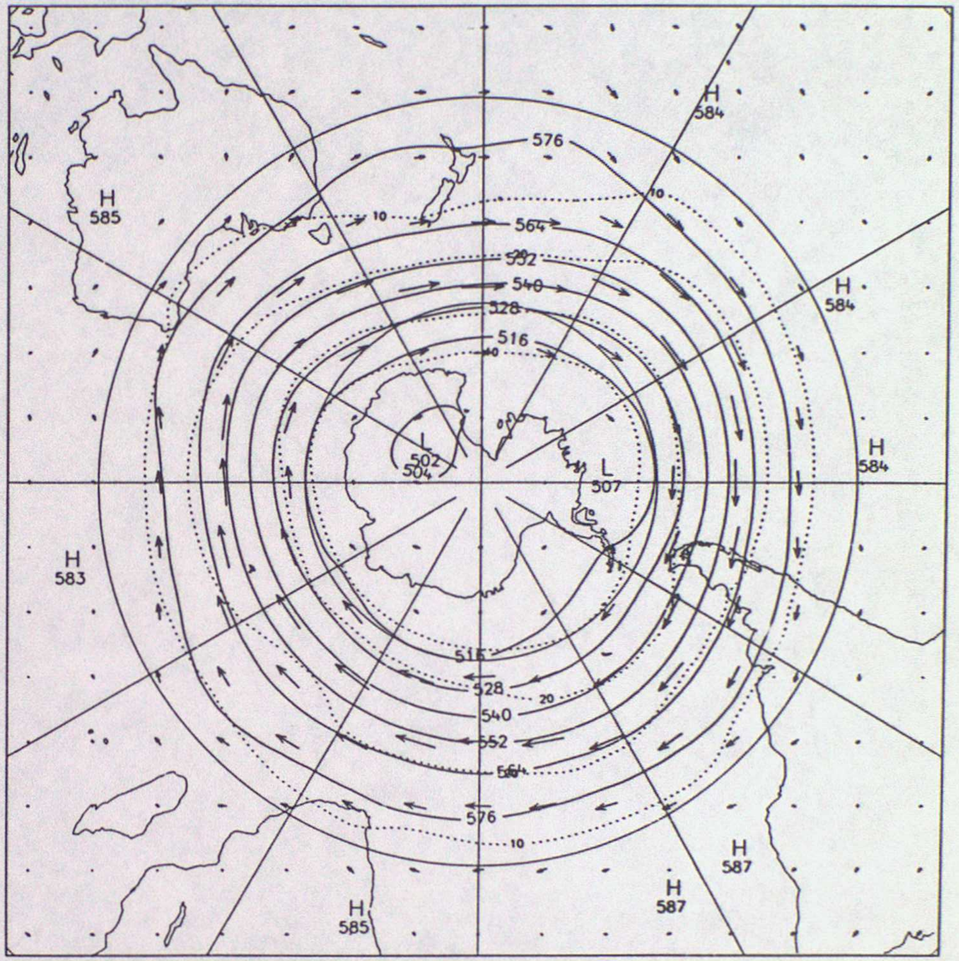
540
552
540
552
564
576
H
585
H
585
10
20
30

→ REPRESENTS 20 M/S   CONTOUR INTERVAL: 120 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   DEC/JAN/FEB1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 500 MB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585
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H
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H
584
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564
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528
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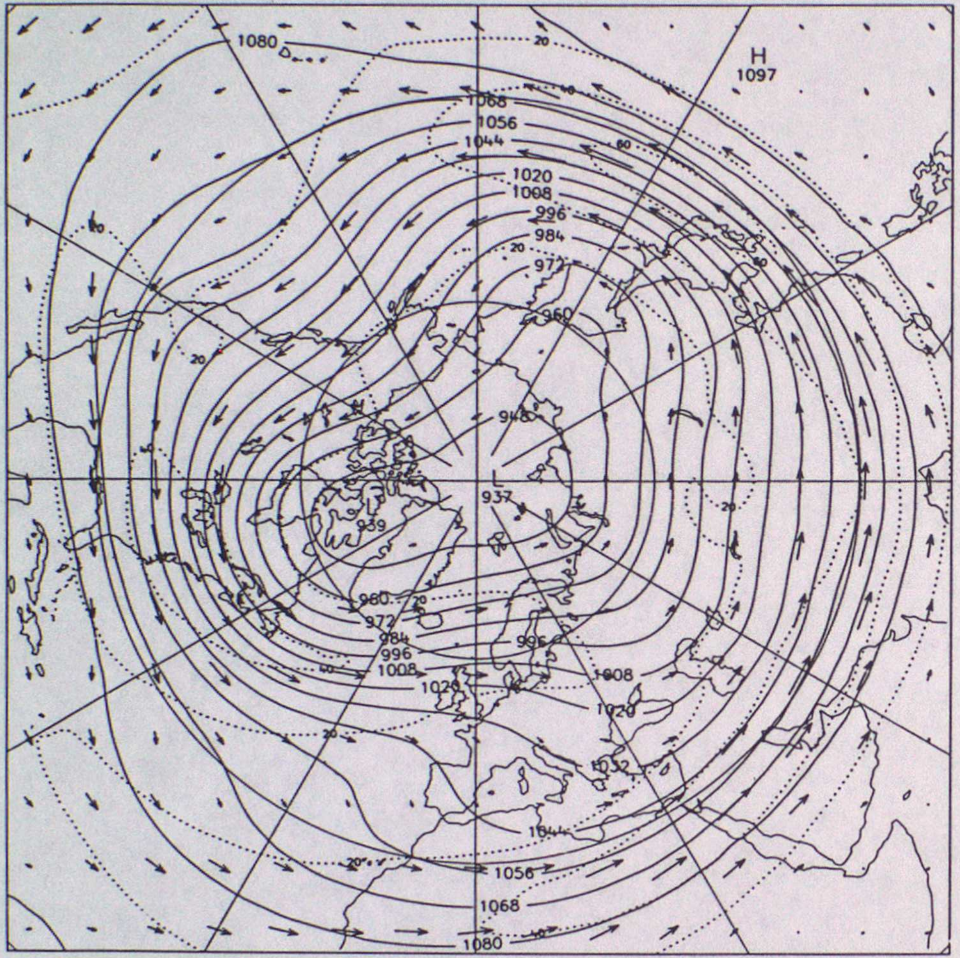
L
502
504
L
507
516
528
540
552
564
576
H
585
H
587
H
587
10
20

→ REPRESENTS 20 M/S   CONTOUR INTERVAL: 120 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. DEC/JAN/FEB1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 250 MB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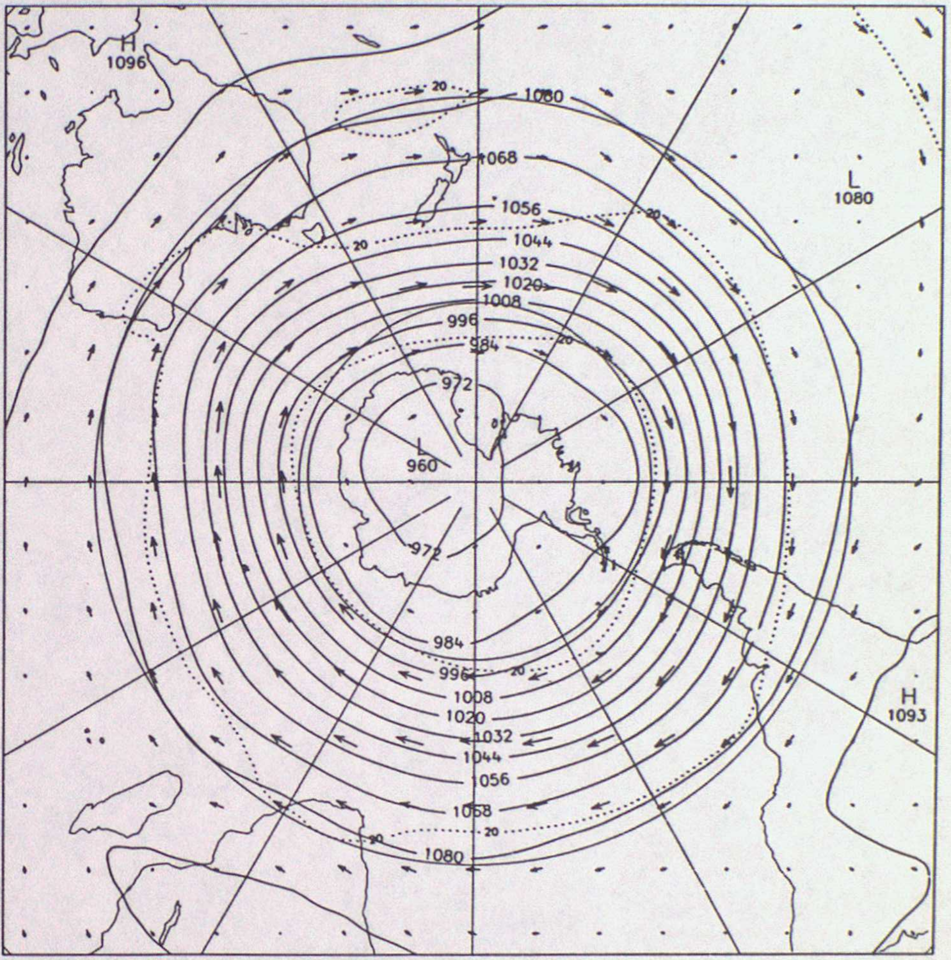
L
937
939
948
960
972
984
996
1008
1020
1032
1044
1056
1068
1080
20
40
60

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. DEC/JAN/FEB1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 250 MB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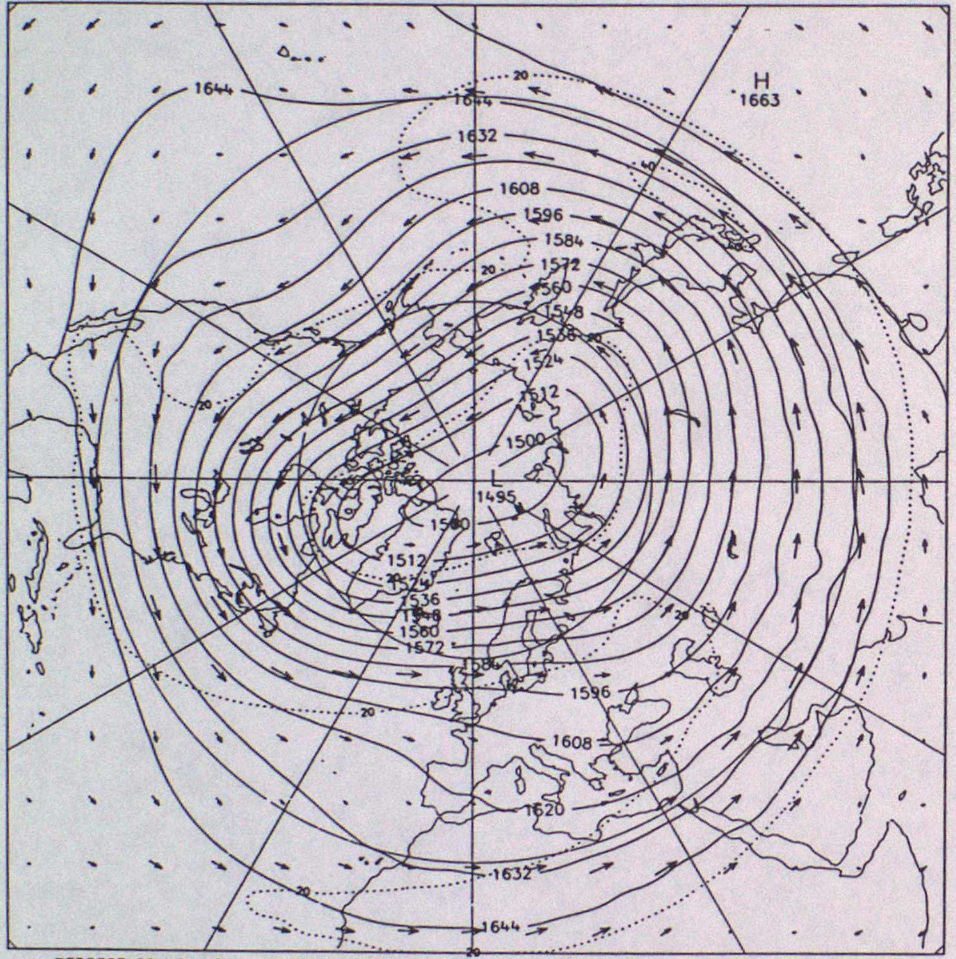
1096
L
1080
H
1093
L
960
972
984
996
1008
1020
1032
1044
1056
1068
1080
20

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   DEC/JAN/FEB1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 100 MB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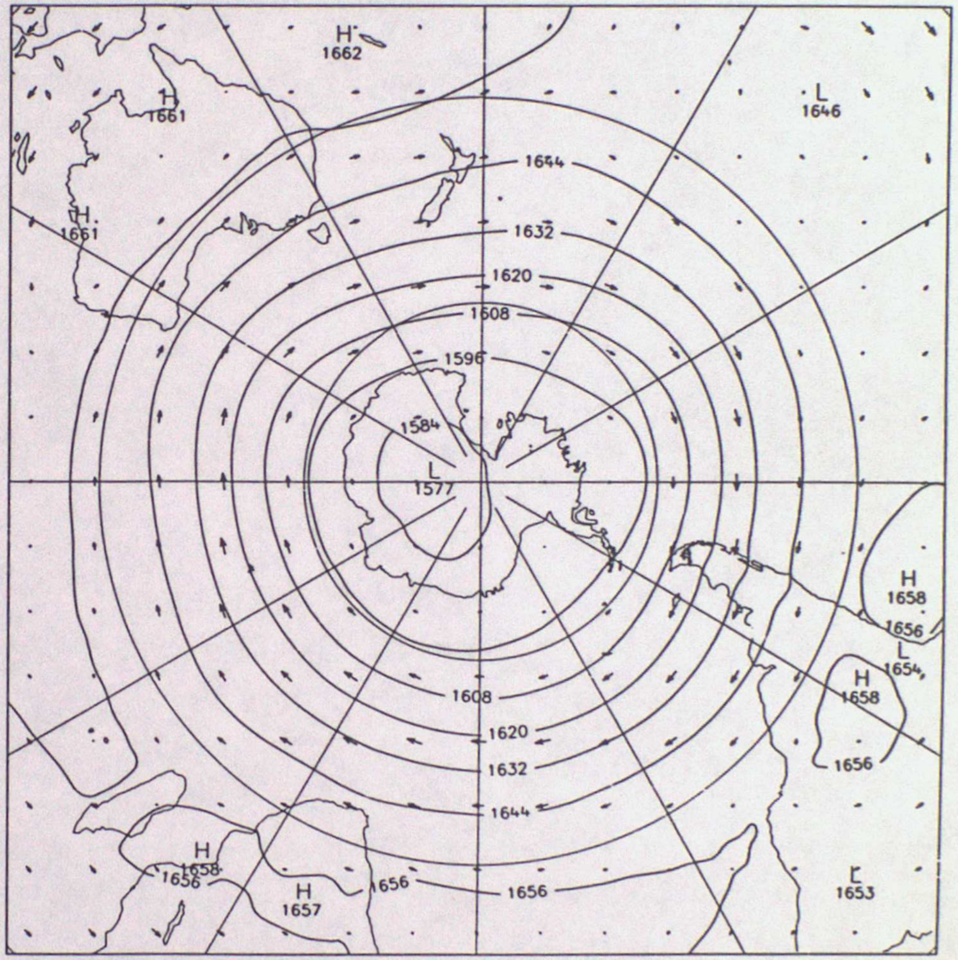
1596
1608
1620
1632
1644
20
40

→ REPRESENTS 40 M/S   CONTOUR INTERVAL: 120 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   DEC/JAN/FEB1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
LEVEL: 100 MB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1662
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1608
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1644
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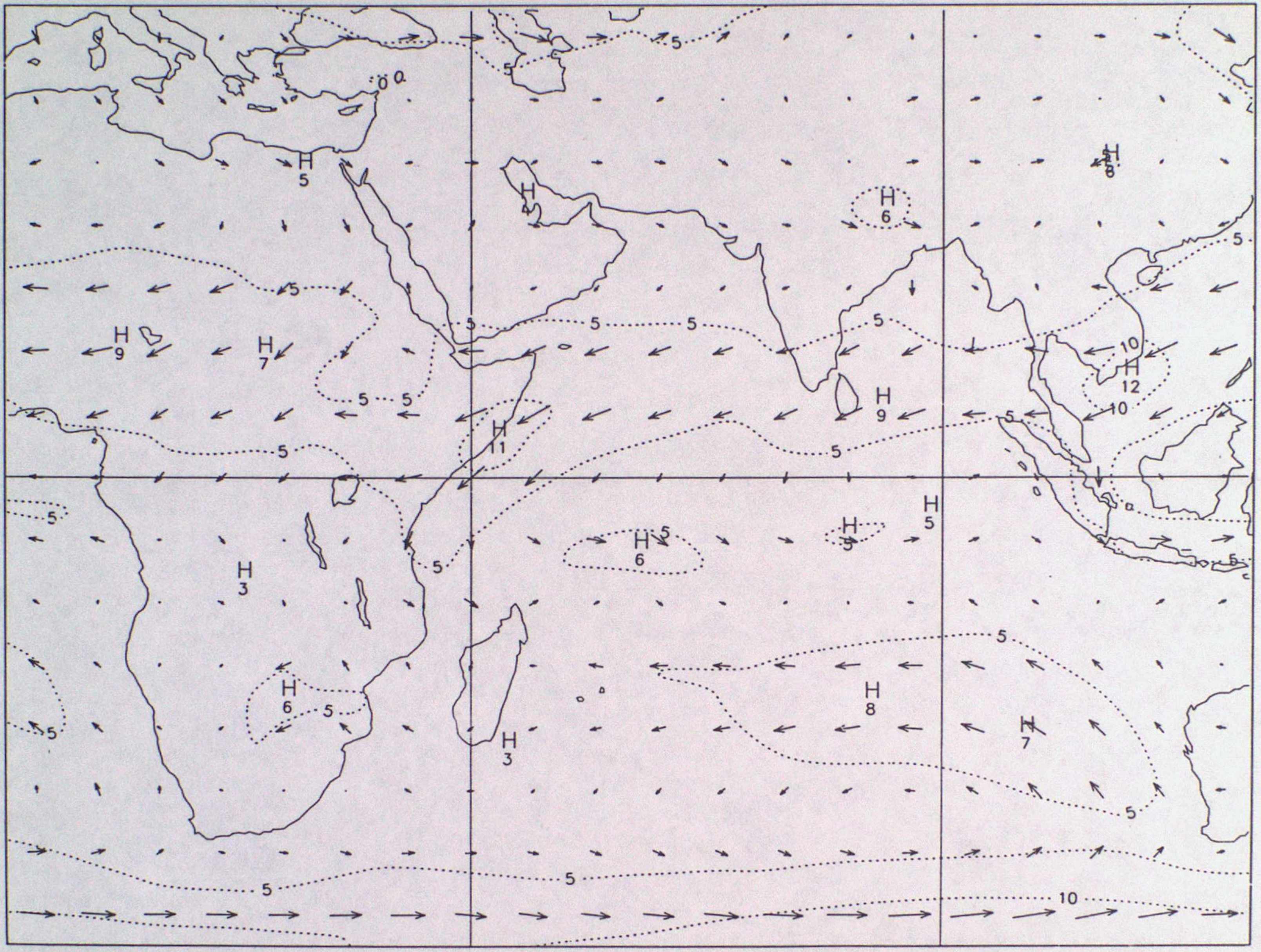
H
1658
1656
L
1654
H
1658
1656
L
1653
H
1658
1656
H
1657

→ REPRESENTS 40 M/S   CONTOUR INTERVAL: 120 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.   DEC/JAN/FEB1989
WIND ARROWS AND ISOTACHS   BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
850 MBS.   BETWEEN LONGS. 0 E - 120 E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H 11
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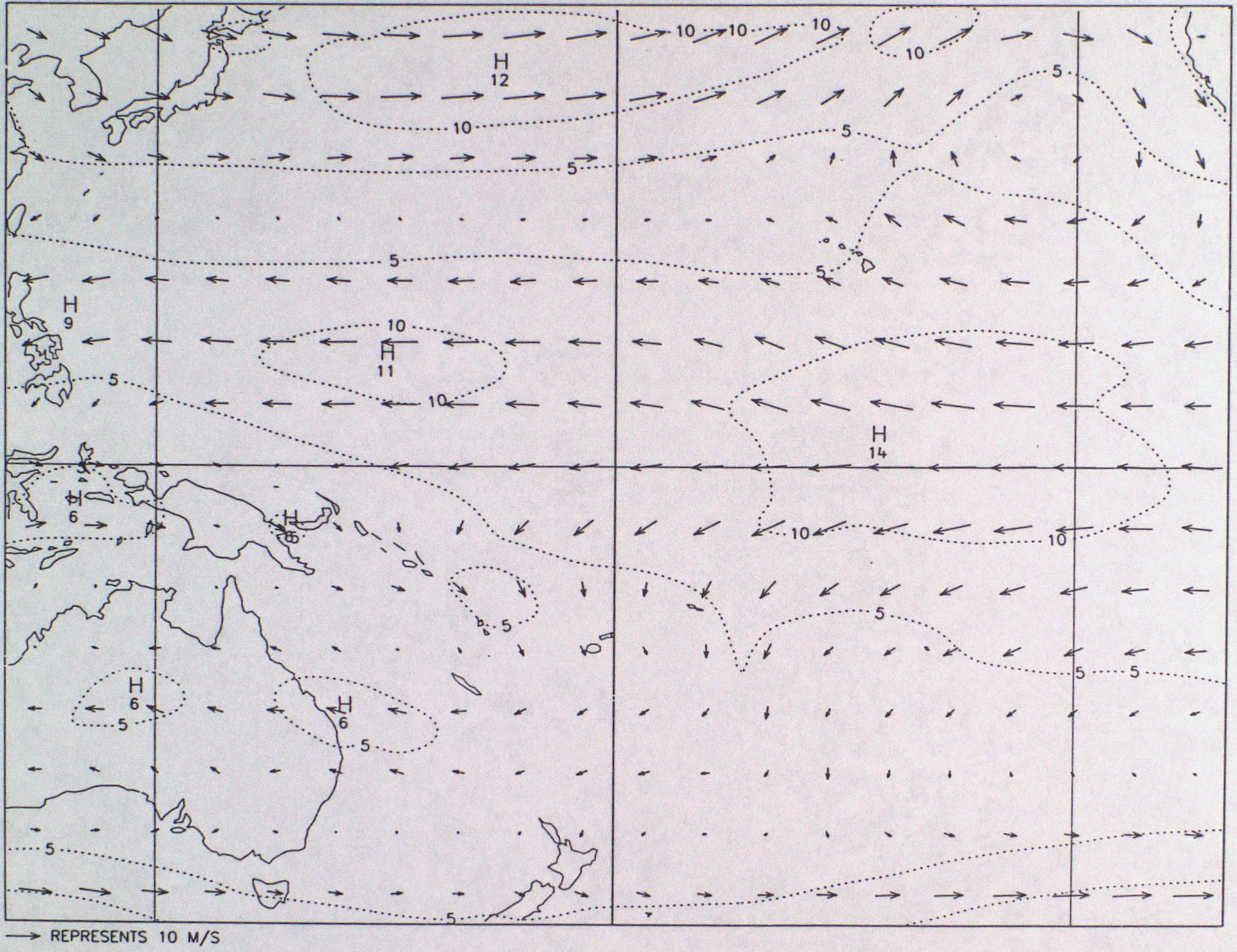
H 5
H 6
H 3
H 3
H 8
H 7
H 6
10

→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.   DEC/JAN/FEB1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
850 MBS.   BETWEEN LONGS. 120 E - 120 W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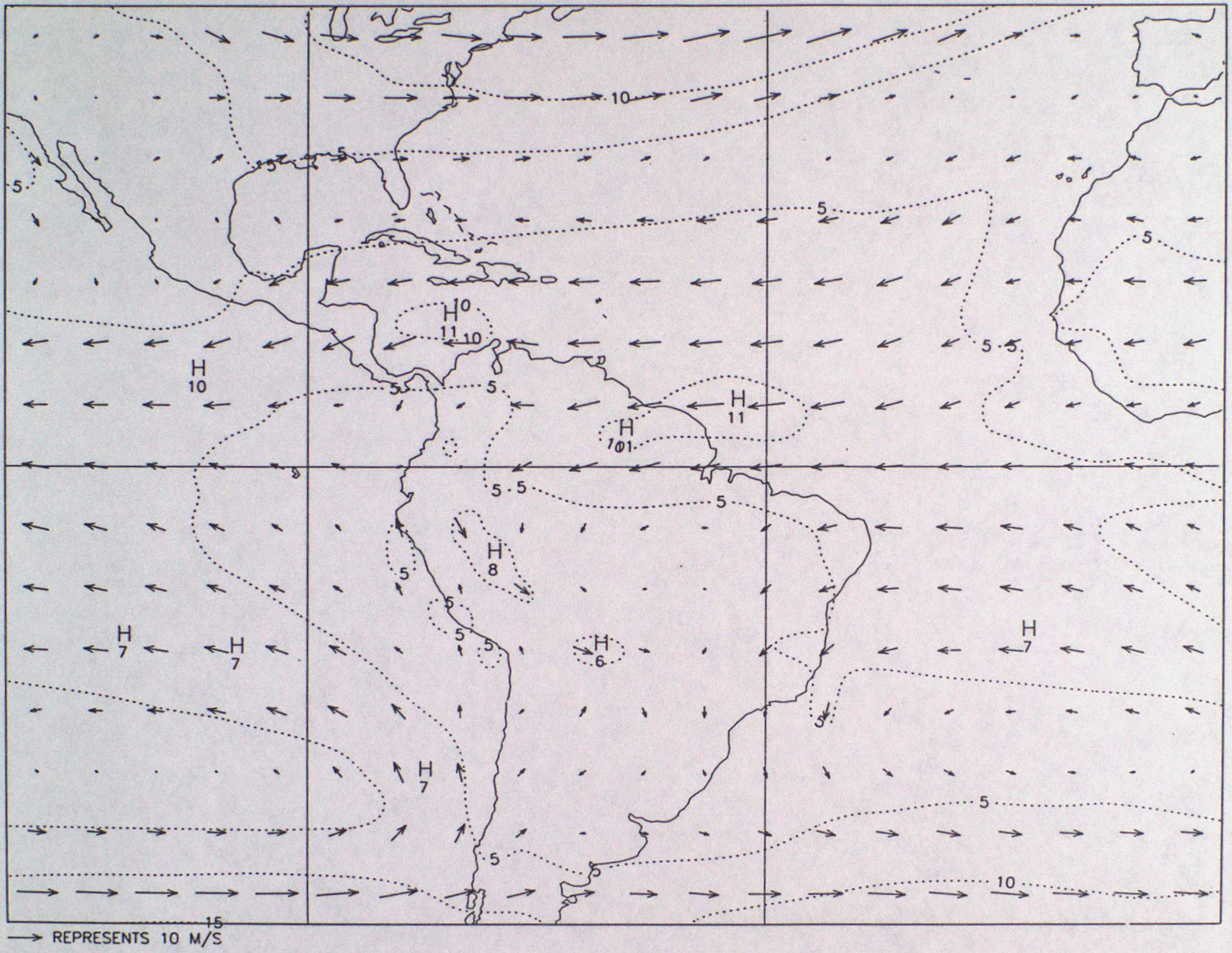
→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS. DEC/JAN/FEB1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
850 MBS. BETWEEN LONGS. 120 W - 0 W


H
10
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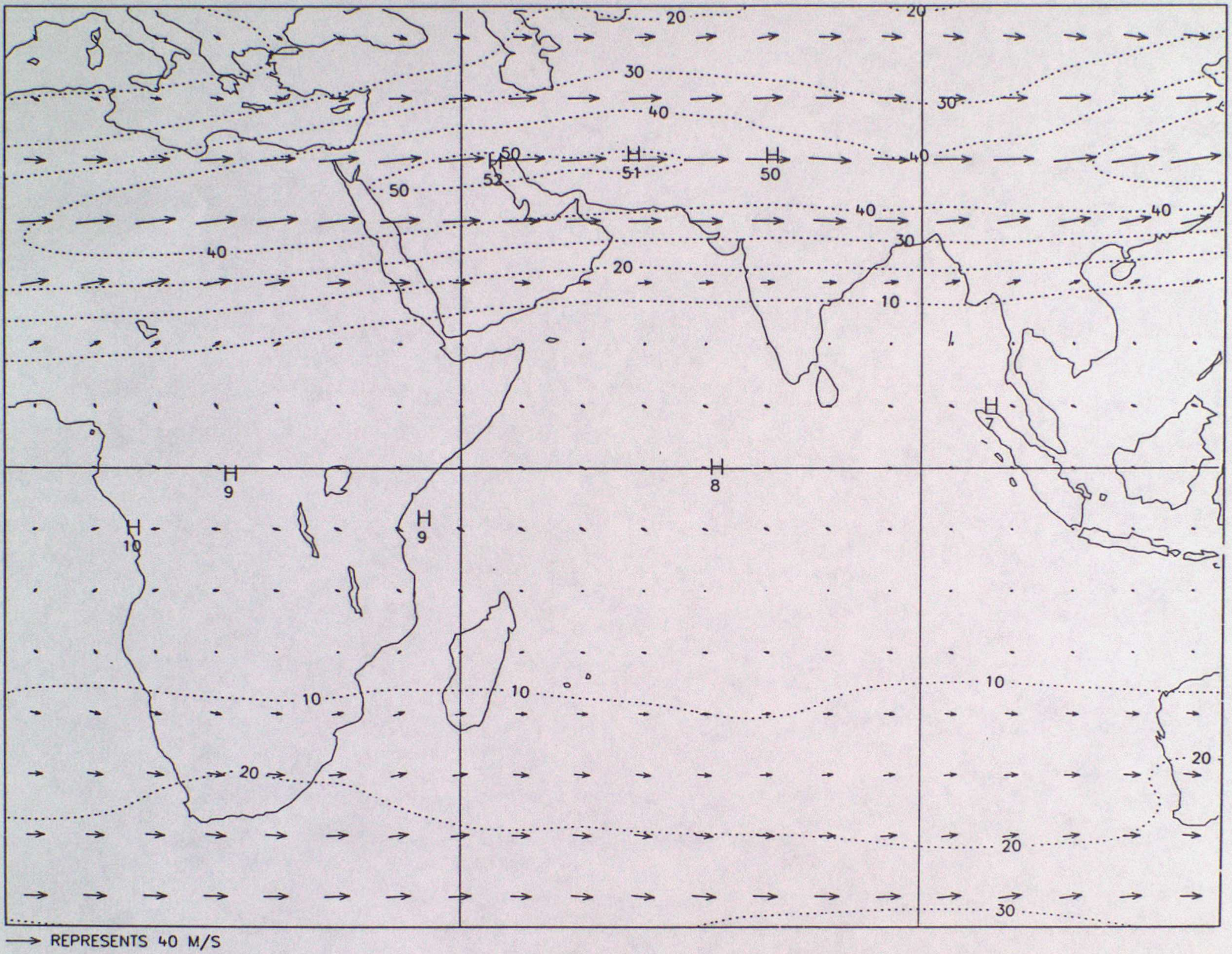
→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.   DEC/JAN/FEB1989
WIND ARROWS AND ISOTACHS   BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM   0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
250 MBS.   BETWEEN LONGS. 0 E - 120 E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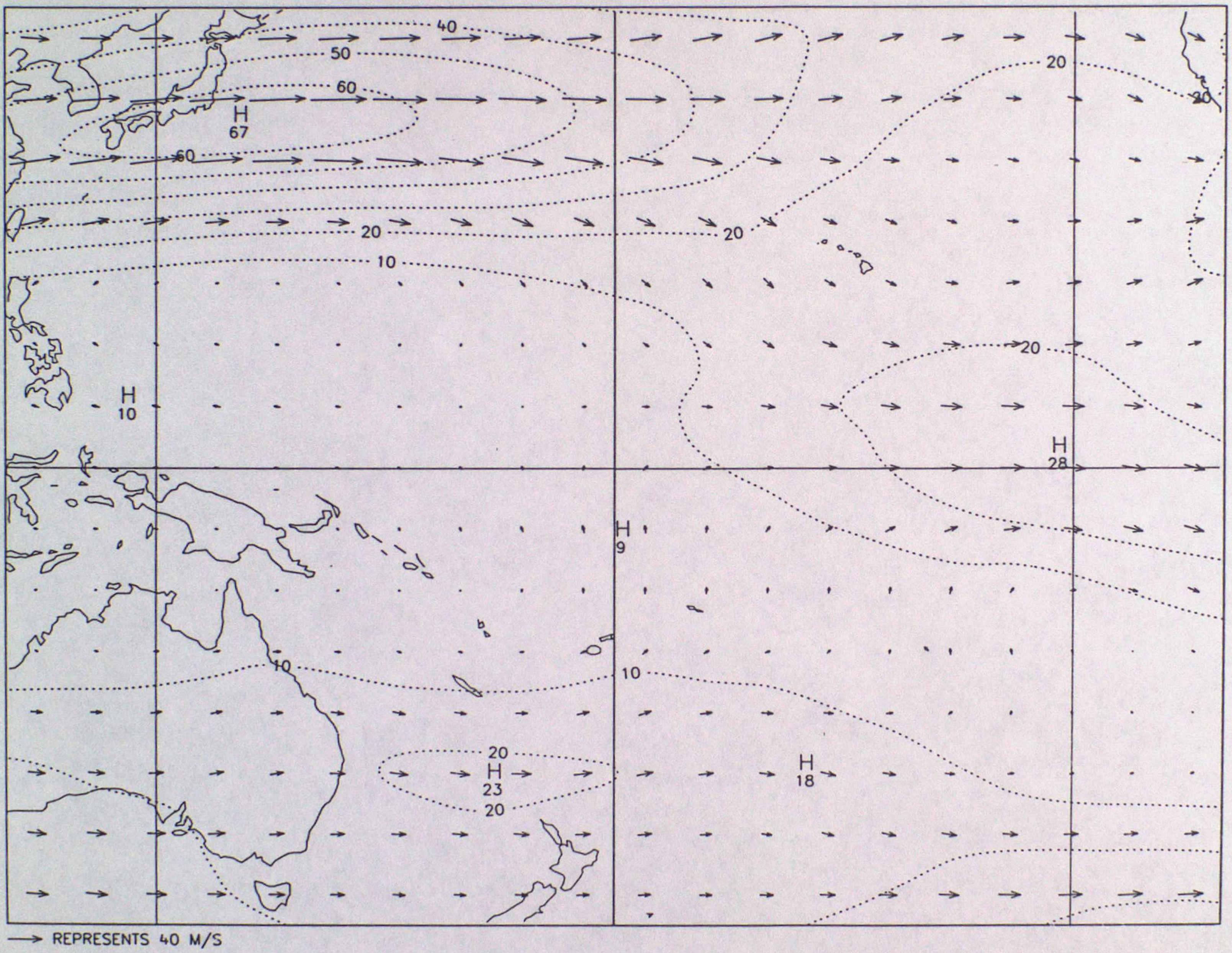
→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS.   DEC/JAN/FEB1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
250 MBS.   BETWEEN LONGS. 120 E - 120 W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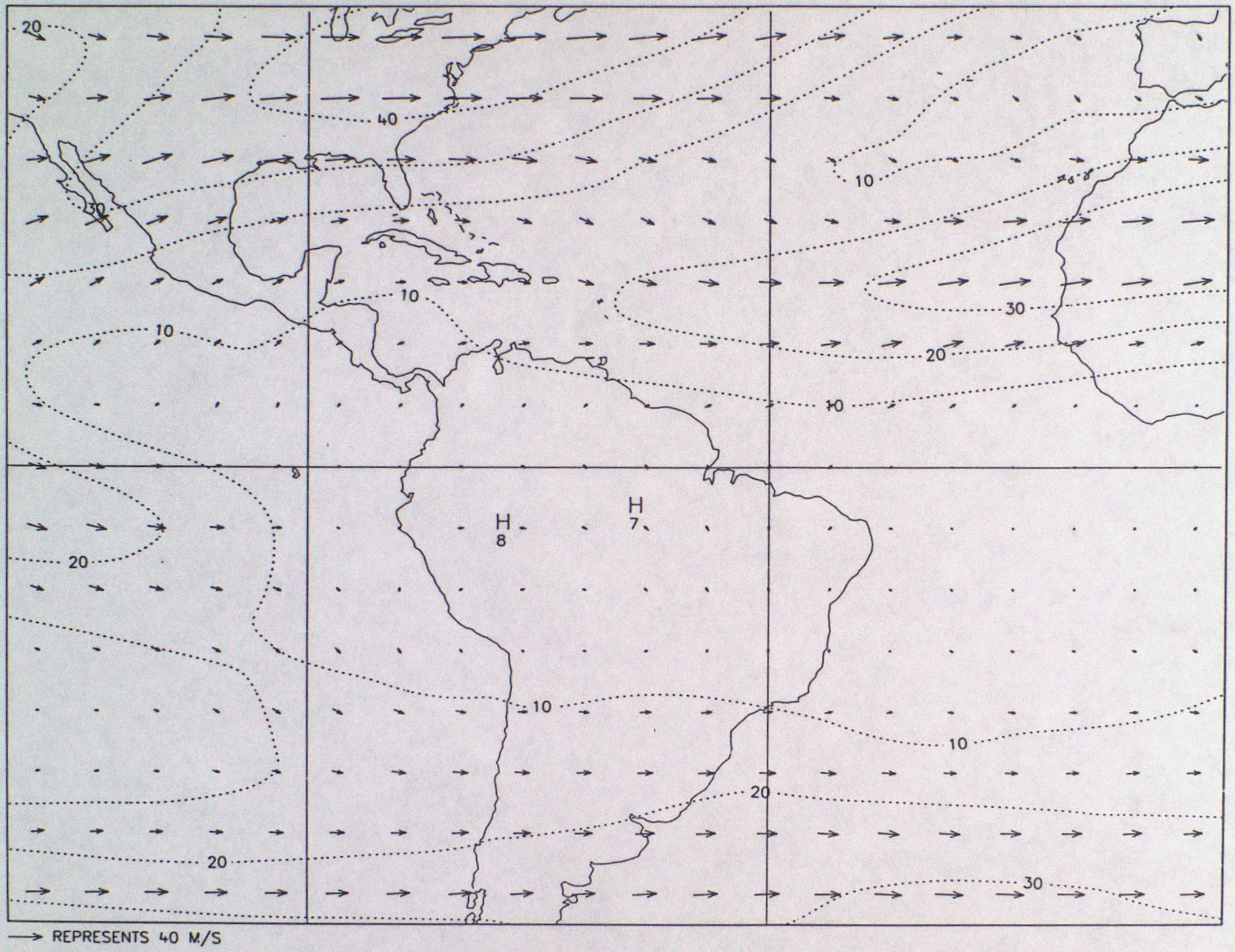
→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS. DEC/JAN/FEB1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/12/1988 DAY 336 TO 12Z ON 28/2/1989 DAY 59
250 MBS. BETWEEN LONGS. 120 W - 0 W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→ REPRESENTS 40 M/S